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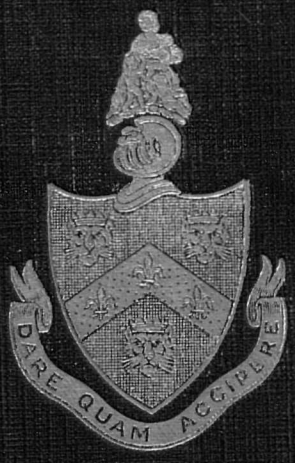

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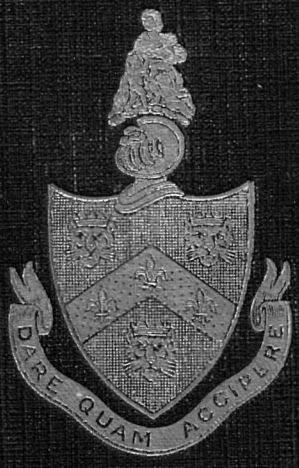

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GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

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PASSIM

THE Editorial stocking was, as usual, well filled, but it gave us nothing new to write about. However, in a ward recently we noticed a large drawing on the wall depicting the three wise men of the first Christmas riding on their camels. We also know three wise men, and they have all been away for Christmas. But now it is all over and our little world is quiet, the Niggers have gone, the concerts and ward teas are over, and bismuth and borborygmi are all that remain to remind us that yet another Christmas has passed. In a hospital many different groups of people take part in the festivities of Christmas, and we often wonder what are their various reactions towards it. For the Sisters and nurses quite obviously it means a great deal of extra work, and for them we have nothing but the highest praise for the way in which they decorate the wards and deal with the gigantic problem of feeding the patients and their friends. For the Residents—well, they are just Niggers; but we have often wondered what it must feel like to be ill over Christmas. The pulses of the phthisical sometimes show an alarming, if temporary, rise, and to the relatives of those seriously ill, some of the more raucous entertainment must be an intolerable burden, which raises a question that must be in the mind of every Resident over Christmas. How many people enjoy the Niggers, and, leaving out the question of their cost, and the work involved in their production, is it all worth while?

That, fortunately, dear readers, is a question which we shall never have to answer. Christmas, anyway, was last year, and now we send you our good wishes for the year 1937. If we cannot be left in peace, let us at least have prosperity.

▭

IN this the first number after our Jubilee, we would like to take the opportunity of thanking Messrs. Ash & Co., our printers, both for their services over a number of years and for their great effort in producing the Jubilee number. Few people realise what an enormous task it is printing even so small a journal as this. Editors will change their minds, copy comes in at the last moment and must be fitted in somewhere, and even when all this is settled, the printing has not yet begun.

Through experience we have come to learn something of these difficulties, and are very grateful to Messrs. Ash & Co. for much valuable assistance.

▭

IN a search for material for the last number, we came upon a series of photographs of Rugby teams of former years and admired their picturesque appearance, sitting astride chairs in their knee-breeches and buckled belts. Those were the days when Assistant House Surgeons wore whiskers and wing collars, when bandaging was an art and Mr. Gladstone was a Governor, but the Hospital had a great reputation for its Rugby football then, and as we turned the pages to the days just after the war, when perhaps our Rugby was at its peak, we could not help contrasting the fortunes of the Rugby Football Club then with those of the present day.

By this we do not mean to cast any aspersion on the team, which lately has made a great effort to settle down after a most discouraging start, and has at times played really well in the face of much bad luck, but we do feel that there might be more effort made towards organised training and coaching of the side, and to us it seems unnecessary that, with more than eight hundred students in the Hospital, only fourteen should be taken to Liverpool for the last match. It is well known that a depleted team often plays better than a full one, but, whether or not another man would have made any difference to the final result of the game,

travelling a hundred miles a man short cannot have been much of an inspiration to a side so often beaten. However, this is the beginning of a new year, and before long the Hospital Cup-ties will be here, so let us hope for better things.

WE always have been fond of foreign stamps, and on tearing open a letter from America the other day we found a polite request from a dental journal entitled "Mouth Health," to reprint a paper which appeared in our columns about a year or so ago. The paper was on "Associated Ocular and Oral Disease," and was read by Mr. Krusin, whom we would congratulate on his Transatlantic fame.

IN our last issue we published a photograph of the old Children's Ward in the process of being demolished to make way for Nuffield House, and much regret that no acknowledgment was made to the photographer. The picture was taken in 1934 by Mr. F. J. H. Edmonds, to whom we are very grateful for permission to reproduce it.

CONSCIOUS of our many errors, we hesitate to mention those of others, but last week we came upon a notice advertising a clinical lecture to be given by the senior surgeon upon the subject of "Strangled Hernia," and many people have asked us whether this picturesque term refers to any particular method of removing the sac. However, for the benefit of those of our readers who have never been on Mr. Hughes' rounds, we would add that we do not think he chose the phrase himself.

ON account of Christmas being at the week-end, the Ward Concerts were held too late for description in this issue, but we understand that they were of a very high order, and hope to publish a short account of them in our next number.

The Birmingham Investigation and Some Others

A Clinical Lecture delivered at Guy's Hospital by M. A. Rushton, Esq.

GENTLEMEN,—The view that dental caries is due to inadequacy of the diet in some particular, chemical or physical, is almost universally held. The exception is that some people believe it to be due to a specific infection, a bacterium or a virus.

You will realise that when, for example, dental caries was introduced among the Eskimos together with sugar and biscuits it might be said that the caries was due either to the diet or to the introduction of infection at the same time. The infection might be independent of the diet or not. With this question of infection I shall not deal.

The effect of diet in preventing or promoting caries has been studied in many ways. Observation of the teeth of uncivilised peoples has shown that good teeth may be preserved on diets so different from one another as to have little in common except the property of supporting life. For example, the Eskimos were found to feed on seal, walrus, whale, reindeer, fish and sea-fowl, while the East Indians fed on wheat-bread, beans and milk.

The effects of varying the diets of civilised peoples is another obvious course of investigation. The decline in the incidence of decay which can be produced by the regime advocated by Sim Wallace, based upon his view of the local importance of the physical as well as chemical properties of foodstuffs, is well known to you.

In recent years investigations have been carried out either to test the effects of diets deemed to be complete or to evaluate the result of varying or increasing single factors in the diet. One such, carried out in Birmingham for the Medical Research Council, has just been ended, and, as it was a carefully planned investigation supported by a grant from the Dental Board, we can do no less than make a careful analysis of the results. It is the more important to do this as I think that some of the summaries of the results which have been published may give a very misleading impression.

The object of the investigation was to determine the effect on dental caries of adding extra vitamin D in the form of radiostol or of cod-liver oil to the habitual diet of Birmingham children living in certain charitable institutions.

There were two principal investigations. In the first the children were divided into three groups: one of these had a daily ration of treacle added to its diet; the second olive oil; and the third cod-liver oil. In the second investigation one group had olive oil added and the other olive oil plus radiostol. The children were inspected at intervals, and the investigations lasted 3 and $2\frac{1}{2}$ years respectively. The average age of the children at the beginning of the experiment was about $9\frac{1}{2}$.

There was, unfortunately, some difference in the ages, habitual diets, number of teeth already decayed, and water supply of the various groups compared, and it is not easy to say what the effect of this was. This must, therefore, be neglected.

In the summary of the results which I will now give you only those differences which are statistically significant will be mentioned.

The results will be considered first from the point of view of possible prevention of caries by diet. In investigation I. there was no statistically significant difference in the absolute percentage increase of carious permanent teeth in the cod-liver oil, olive oil and treacle groups; nor in the deciduous teeth between the cod-liver oil and olive oil groups. For teeth which erupted in the course of the experiment, taken separately, however, there was a difference, the incidence of caries being 26, 19 and 12 per cent. in the treacle, olive oil and cod-liver oil groups respectively. This shows that for these teeth cod-liver oil was beneficial as compared with olive oil and treacle, but that, in spite of it, an incidence of caries of 12 per cent. occurred among such teeth within three years of eruption. In the case of the erupting premolars and second molars, considered separately, there is a significant difference to the advantage of the cod-liver oil group, but it must be noted that no less than 41 per cent. of second molars in that group became carious within at most three years of eruption; and since the average age of this group at the beginning of the experiment was $9\frac{3}{4}$ years, most of them can only have been erupted for about one year by the end of it. This is no mean rate of incidence. It is interesting also to note that the beneficial effect of giving olive oil as compared with that of giving treacle in the case of erupting teeth was as great as that of giving cod-liver oil compared with that of olive oil; so that if no cod-liver oil had been given, the experiment might have been held to prove the virtue of olive oil or the virulence of treacle.

Investigation II. in which olive oil was given to one section and olive oil plus radiostol to another gave a more marked result. The figures for the permanent teeth taken together show a significant difference between the absolute increase percentages in the olive oil and olive oil plus vitamin D groups, the figures being 14 and 8 respectively. In the deciduous teeth there was no difference. For the newly erupted teeth taken together the figures were 18 and 8 per cent.; for premolars separately 13 and 3 per cent.; for the second molars 54 and 17 per cent.; all significant differences.

The addition of radiostol thus reduces the incidence of caries in the erupted and erupting permanent teeth of Birmingham children fed on the diet in question. There is, of course, no question of complete prevention; the second molars in the radiostol group became carious at the rate of 17 per cent. in the time between eruption and the end of the experiment, probably less than a year. With regard to the possibility of complete prevention of caries being produced by the administration of vitamin D from pregnancy onwards, that is open to proof; we have no evidence before us.

Next considering the extension of caries as distinct from its incidence, we have another set of figures, the extension being estimated by an Average Caries Figure determined in a reasonable manner. In investigation I. there was no difference for the permanent teeth between cod-liver oil and treacle groups, or for the deciduous teeth between cod-liver oil and olive oil groups. In the case of the permanent teeth the spread in the cod-liver oil group was almost 100 per cent. When all teeth, permanent and deciduous, are taken together, however, the cod-liver oil group is found to have the advantage, and this is also true for the teeth that erupted during the experiment. In the second investigation there was significantly less spread in the permanent teeth in the vitamin D group, the increase in the Average Caries Figure being 68 per cent. for all teeth taken together. From this we must conclude that the addition of vitamin D to the diet of children in the circumstances of these Birmingham children delays the spread of caries in permanent teeth. The result is not impressive, however. The extension was at the rate of 93 per cent. in three years and 68 per cent. in two and a half years in the cod-liver oil and vitamin D groups respectively. This should be compared with the results of Boyd and Drain, who in 1931, by giving a planned and full diet and making sure that it was eaten, were able to produce complete arrest of caries with stony hardness of the dentine in ten weeks in every one of eleven children with rampant decay. Comparison suggests that an adequacy of vitamin D is by no means as pre-eminent a factor in the prevention of caries as the authors of the M.R.C. report might lead one to suppose, and that while the addition of this vitamin to the diet can produce some improvement, especially with respect to teeth which are about to erupt, yet success in the prevention of dental caries lies rather in the provision of a diet which is complete in a large number of particulars than in adding one vitamin to that commonly used.

I said just now that the improvement, such as it was, produced in Birmingham children by giving extra vitamin D would not necessarily be found with children in other parts of the world. Maybridge, writing of the children in Hawaii, mentions the great incidence of caries there among a population of some half-dozen nation-

alities, and shows that as there is tropical sunshine nearly all the year, and moreover as cod-liver oil is served out in many schools "by the bucket," there can be no possible deficiency of vitamin D. And Middleton Shaw, in Johannesburg, where there is four or five times as much sunshine as here, where the native children wear no clothes, and where rickets is unknown, says that 74 per cent. of the native town children have decayed teeth. The addition of vitamin D would certainly not cause any improvement in these circumstances.

There is a lot more evidence of the same kind; for instance, Dr. Wejdling, of Stockholm, who examines the recruits for the Swedish army, states that the recruits who show signs of old rickets and who have therefore suffered from vitamin D deficiency in youth, have no more decay than the others.

The beneficial result of adding vitamin D to the diet of the Birmingham children is probably as McCollum suggests, simply due to the fact that their diet was inadequate in what everyone will admit is an important particular; and there is no evidence to suggest that an unlimited quantity of vitamin D will prevent dental decay any more than was done in that experiment.

So much for Birmingham. We will now turn to some more general considerations.

It is a commonplace to say that man is the only animal which commonly eats prepared and refined foods and which commonly suffers from dental caries. The wild animal by instinct selects the quantities and proportions of various raw foods sufficient for the preservation of its health and teeth. When it is fed upon foods sufficient to maintain reasonable health, but not selected by itself from those which it could obtain in the wild state, it may suffer from dental caries (*e.g.*, the baboons on the Monkey Hill at the Zoological Gardens).

Primitive man preserves the instinct as to what quantities of various foods available should be eaten, and of course the actual diets differ greatly in different parts of the world according to the race and life of the people, the climate, and kinds of food obtainable. The invention of simple cooking as an addition to raw foods and of alcoholic drinks was not sufficient to befog their instinct. The number of foodstuffs from which they had to choose was limited, and did not vary other than seasonally, except in times of famine and migration.

Among more highly organised peoples disturbing factors appear. The aristocracies have the opportunity to have collected for them foodstuffs which they regard as especially delicious and fine, and the effect of this on the teeth is that they become decayed (*e.g.*, in ancient Egypt).

We thus have the paradox that those of mankind in the best position to choose their food unhampered by necessity did so in a way which had a disastrous effect on their teeth. Had they then lost their instinct in this matter? To explain this one may draw a distinction between what gives pleasure, such as sweet things and alcohol, and what satisfies a bodily lack, such as fat and salt, and suppose that among people who can choose, pleasure may be stronger than instinct and upset that balance which the latter would ensure.

Freuchen, who has lived all his life among the Eskimos, gives an example of this in one of his books. An Eskimo found a case of sugar in an abandoned traders' settlement and gave it to his small daughter. She was so delighted with the taste of it that she ate sugar all day long and would not eat any meat or other food. She was sick from time to time, but continued to eat practically nothing else until the whole supply was finished, although she became very pale and weak.

At the present time the great communities of civilised peoples have a greater choice of food than any aristocracies of former days.

Like the aristocracies, they can obtain as much as they wish of the pleasurable foods, and often at a cheaper price than the hunger-needed foods. They are not limited to unprepared foods like the wild animal, nor to local foods which their racial experience has enabled them to select in the proper proportions like the Eskimo. They can obtain foods produced in every part of the world. Even then their instinct might be expected to make a good selection of raw, unprepared or simply cooked foods, upon their merits. But when we add to this that a large amount of the cheaper foods is refined for æsthetic reasons or altered for storage, it would be no wonder if their instinct for selection acted in a rather feeble manner. Their position becames like that of the baboons on the Monkey Hill in that they maintain a reasonable degree of health with decay of the teeth, though not because their diet is limited, but because they cannot select it properly.

That the instinct for food selection still persists vigorously in the very young of the human race was shown in the interesting experiment of Davis. This was performed on 15 babies from six to eleven months old, who were allowed to select their own food, both quantity and quality, from a large number of raw or simply cooked natural foods (meats, glandular organs, whole cereals, vegetables, fruits, eggs, milk and salt) without any guidance or restraint whatever. All the children, who were carefully watched, did extremely well, none of their teeth decayed during the course of

the experiment, and two of the boys who have continued the regime and are now $8\frac{1}{2}$ and 9 still have no dental caries.

Unfortunately, the child's power of selection seems to become entirely unreliable in many cases after a few years. In Michigan, a small group of caries-free children was compared with another of caries-susceptible children. It was found that the caries-free children had excellent appetites, were not faddy about their food, and had no great craving for sweets. The caries-susceptible children ate irregularly, were very faddy, and ate theoretically unsatisfactory diets, and had a great craving for sweets and highly sweetened foods. In relation to Broderick's hypothesis, it is interesting to note that no consistent chemical difference could be found in the blood or saliva of the two groups.

An important series of experiments carried out by Boyd and Drain supports the view that the preservation of the teeth depends upon the selection of a diet more nicely chosen than is necessary for the preservation of a reasonable degree of health in the rest of the body, and seems to show that upon such a diet dental caries may not only be prevented but also arrested. It began with the observation that in a certain number of children in hospital the soft dentine of carious cavities had become hard. On investigation it was found that these were all diabetic children who were receiving insulin and a certain diet. The latter was so arranged that fat rather than carbohydrate was the source of energy, the proportions of protein, carbohydrate and fat being 7 : 9 : 21. The total diet had a basic ash, and consisted of a quart of milk a day, cream, eggs, meat, cod-liver oil, bulky vegetables and fruit. Since the arrest of decay might have been due to the insulin (and Broderick claims that hardening of carious dentine has followed its use in his cases), the next step was to try the effect of a similar diet on children who had not got diabetes. Four children with much caries and softened dentine were, therefore, put on this diet for two months or so, and at the end of this time the dentine was of stony hardness—a result which may well be compared with the spread of caries occurring in the Birmingham experiment in spite of giving extra vitamin D. Two of the children were then placed upon the ordinary ward diet and allowed to choose their food, and very active decay recommenced. Further experiments were as follows : five children below school age were given the original diet, but with rather more carbohydrate, in their own homes, and in all caries was arrested in ten weeks.

Even more striking was the effect observed in four cases of cœliac disease in which fats could not be given. These had much of their food in the form of sugar and carbohydrates, but about twice the usual quantity of protein ; and in two who already had caries the condition was arrested, while in the two babies it did not develop. The diet could thus be varied to a large degree without affecting the result, but the investigators regarded certain features as the most important : 1 gramme of protein a day for each lb. of body weight, fresh fruits and fruit juices, and cod-liver oil. The principal factor in preventing caries, they considered, was the adequacy of the diet and the balance between its various constituents. In the conditions of the experiment it was disastrous to allow the children to choose their own food (they were much older than in Davis's experiment)—either they did not eat enough, or too much of a single kind. In the latter case they would not have enough appetite for a sufficiency of the other necessary parts of the diet.

The kind of food of which children will eat too much if left to themselves is apparently sugar and carbohydrates, but whether the pernicious effect which sugar is supposed to have is due to preventing other food from being eaten or not must still be an open question ; it might, for example, act through being a good culture medium for Bac. Acidophilus.

A group of observers in Michigan studied the teeth of 23 normal girls in the University hospital. They all had the same diet, said to be adequate, but some were given sweets as well every day, and none had any cod-liver oil or artificial sunlight. Of 14 children who did not get extra sweets nine showed arrested caries and five not. And of the group with extra sweets nine had progressive decay and three remained immune. Disappearance of Bac. Acidophilus from the mouth was associated with arrest of caries and low sugar and starch content of the diet.

In the last examination for the L.D.S. R.C.S. diploma the examiners asked the candidates, as they do from time to time, what advice they would give to a mother who wished her child to escape dental caries.

It is a very pertinent question, and one on which we should all form an opinion. Although the protagonists of various schemes for preventing dental decay are in many cases strongly opposed to one another, it is a fortunate thing that their remedies are not incompatible. The only regime of well-proved worth is that of Sim Wallace. But this is not vitiated by the addition of excess vitamin D or of suitably tested milk, or of a high protein content ; and there is no reason why the diet should not be arranged so that it is completely

adequate physiologically, and, in addition, has a basic ash.

It is frequently written that the diet of the mother during pregnancy has a bearing on the question, but there is small proof of this. The fœtus appears to take from the mother everything it wants, whether the mother has it to spare or no.

The recommendation of a diet such as I have mentioned for the child is probably the utmost we can do at the present time to prevent the child's teeth from decaying. Tooth-brushing and visits to the dental surgeon are a last line of defence, the comparative inefficiency of which we well know, though they are at present very necessary.

But we have no right to be content until we have ascertained with certainty what diet and what variations of it are compatible with the preservation of the teeth. When this has been done the prevention of dental caries in healthy children will become an administrative rather than a medical problem.

It seems likely that the best way to bring up children with healthy teeth will be to treat them as a farmer treats his stock, that is to feed them a carefully selected diet under proper supervision, possibly through the organisation of school meals.

The meagreness of reliable experimental work carried out on mankind is astonishing when compared with the great effort and expense needed to repair the teeth of successive generations. At a time when it has become necessary to supplement the diet of school children in many districts for other reasons, there is the opportunity of combining sound investigation with benefaction. It is difficult to imagine any more useful way in which the Dental Board of the United Kingdom could expend some of its mighty income than in arranging intelligently to increase, vary and improve the diets of certain small child communities and to observe the results.

The Niggers of 1936

THE Residents' Room in the College had a strange appearance on Christmas morning. Pirates and Pierrots, Cowboys and Coons clamoured for the attention of the make-up expert, whilst those whose faces were already bedaubed, amongst them an over-fed Sultan, partook of various refreshing beverages in the background. By half-past ten the last of the grease-paint was on and, with higher centres suitably dulled, the whole party set off for Evelyn, having paused for a few moments in front of a camera on the Colonnade steps to make a permanent record for any who wished to be reminded of the occasion.

Once marshalled outside the door of Evelyn, Messrs. Elliot and Moir performed the time-honoured formality of running in and getting the note, and then accompanied by vigorous drumming the whole company squeezed its way between the beams (Balkan and otherwise) to the far end of the ward, where the O.P.O.'s set the ball rolling with :—

(*To the tune of* " *The Birth of the Blues* ")

They came in two's and in three's ;
Some can't breathe, some can wheeze,
But they can't get
" No sleep of a night."

And some have aches, some have pains,
Some have cuts, some chilblains ;
But they can't get
" No sleep of a night."

From an ambulance
They brought one in,
Borne on a litter.
Doesn't he look ill ?
He's had his fill
of " mild and bitter."

Our life is full to the brim
With these troubles so grim,
But we manage
" To sleep of a night."

When I came here in '23
I was ill,
As ill could be,
'Cos my nerves were
All over the place.

I thought my stomach had slipped,
That my bowels were adrift,
'Cos my nerves were
All over the place.

For umpteen years
I've been up here once a week, sir ;
And with my nerves so bad
I never seem
To get much better.

So I see you to tell you
Of my woes and ills,
And to ask you
For more of those pills.

Then the four House Surgeons sang " Some of these days," and countered any tendency to

excessive self-esteem amongst themselves with the following parody, which ended in a very touching little ballet in skirts of bandage cloth—or so it looked to us :—

" They tell me that I'm gentle."
Chorus—Not gentle, but mental.
" I'll make you all contented."
Chorus—Not contented, but demented.
" The boys are jealous of my nature."
Chorus—Don't be a sucker, the patients hate yer.
" When you grow older, you won't be quite so funny.
Who do they come to when they've a pain their in tummy ? "
Chorus—They do not love you.
" Oh, yes, they do.
They love their little bright-eyed, hair-dyed doctor."
Chorus—No, not you.

" You know that I'm light-hearted."
Chorus—Why the hell's he started ?
" I'm just a simple fellow."
Chorus—Yes, simple and yellow.
" I cannot take these cracks, they're telling lies."
Chorus—We'll say we're not, we've got our spies.
" Now on a night round I have a laugh."
Chorus—He talks to Sisters as they go to their bath.
" You'll miss me some day, I'm not so bad, sir ;
You'll miss your little blushing blue-eyed doctor."
Chorus—No, not you.

That concluded the entertainment in Evelyn, and, perhaps so that the intricacies of the attics might be safely negotiated while the step was still light, the party visited Patience and Samaritan, where the R.O.'s announced that they were old cow-hands. This did not surprise us much, for we had already admired their hearth-rug trousers, kept in position by a small arsenal around the waist, and, looking at Mr. Kelsey, our minds had wandered back to the days of silent films and to Tom Mix in particular. However, they returned to their everyday business and made their parody the more intelligible by demonstrating a picturesque, if somewhat precipitate, labour :—

Step aside, you meddling nurses, quick !
Let the R.O.'s carry on.
On the District, Salamon, Queen and Vic.,
We're David, Uncle and John.

Membranes have gone—hit the opposite wall.
It's a breech. You're telling me !
Bring mask and apron, gloves and gown,
And strange things you will see.

Mr. Elliot then defined his position as follows :—

I'm the baby of the three,
Chief sucker, that's me !
They leave me in
When they've girls to see.

By kind permission of London Panoramic Co., N.2

I see relations and transfuse blood ;
I get so much that the ward's in flood.
And yet with sister my name is mud :
" You haven't done a round to-day."

Sir Harold tries
To put me wise,
And Gynæ Gib.
Gives tips *ad lib.* ;
But when there's a night call I feel flop,
There's a great big tear as the head goes pop,
And the bleeding P.P.H. won't stop—
Sucker-in-Chief I'll say !

This was very well received and applause was distinctly heard, though it was soon drowned by the A.H.S.'s singing about their cockles—a song with a fine tune and the added merit of having a chorus of exactly two words, in which the whole company were absolutely word perfect. Some of the eccentricities of the Assistant Surgeons were recalled to the same tune :—

Now what shall we do ?
The patient's gone blue,
For we have removed all the lung he had left ;
But Brock, undefeated,
As the op. was completed,
Cried, " He'll have to live anærobically now ! "

Alive, alive O !
Alive, alive O !
We try to keep patients
Alive, alive O !

Job and Luke came next on the programme, and here we heard the H.P.'s for the first time. They sang " Virginia " tunefully enough, and, as a variation from the original words, gave us an explanation of why Mary Ward is considered such a popular cafeteria for those engaged on night rounds. We have our own views on this, but they are beside the point :—

You have heard a quartette of physicians ;
We must sing to you, just two by two.
Though we have been told that we should be bold,
We banish fear with lots of beer—
Then we really do not care.

As we wander round the wards together,
We make a noise to let the boys
Forget their aches and pains.
If our song's appealed to you,
Then we're really happy too, for
We're just four young House Physicians, too.

Before the party left the House Surgeons repeated their version of " Some of these days."

In Christopher and Naaman the G.-U. and E.N.T. House Surgeons, an oddly assorted trio, revived a well-known pantomime favourite, " No one believes I'm a mermaid," and then summed up popular opinion on the various specialists as follows :—

By kind permission of London Panoramic Co., N.2

William and David they christened me,
Though now it's been cut down to George.
I was brought up as a surgeon should be,
And hoped that ahead I would forge.
But Rudy was going,
And there was no knowing
Which of us would take his job on.
So they gave it to me,
If only to see
That at last they could really put Brock on.

No one believes I'm a spec'list,
And honest and truly I'm not;
I spend my time on " D " floor, Nuffield House,
Causing my hard-working dressers to grouse.
Some people say I'm a learner,
But that, of course, is all rot.
Oh, the ward's in such a confusion
When I do my hundredth transfusion!
Oh, no one believes I'm a spec'list,
And honest and truly I'm not.

Thomas, yes, Thomas 's my name, so you see,
Doubtful I've been from the first.
I dress myself just as odd as can be,
And one day my white coat must burst.
But with my " big airway "
I've got an unfair way
Of taking it out of you boys.
For though courtly and kindly,
With plenty behind me,
At least I'm an awful big noise.

Everyone thinks I'm a surgeon,
But honest and truly I'm not.
Some people think I've been seized with the gout,
Others say what a remarkable shout.
Some people say I'm transparent,
But look at me, isn't that rot?
Oh, it makes me so hot and untidy,
Twisting out tonsils on Friday.
Everyone thinks I'm a surgeon, they do,
But really and truly I'm not.

Continuing the songs of the specialists, the Children's and Nerve H.P.'s, with the Eye H.S., sang " Can't we talk it over? " and discussed their chiefs in these verses :—

We think that it's glaucoma,
Or a staphaloma;
We're not quite sure what to say.
It would, we think, be better
To consider whether
You'd try our treatment for a day.

Sister is a nuisance and Law is a flop,
Morgan is not quite so bad
If that blinking he would stop.
Can't we talk it over, etc.

Do you need a doctor?
You need a doctor.
Before you tell me you're blue
Come and see Gillespie,
Our own Gillespie
Will psycho-analyse you.
He'd see you in a little room all alone,
Finding out things he should never have known.

Then came the first real all-black duet, when Messrs. Humby and Musgrove sang " Minnie the Moocher," with novel words of their own and a chorus that was always original.

So popular was this that they repeated it in Lydia and Queen, where the R.O.'s, now thoroughly at home, reminded us of their " Empty saddles " and of certain ways of filling in their spare time of which we may quote the following :—

We're merely three Housemen
Who come into Queen,
Poor miserable half-witted mutts.
We're here just to write up what Sister decrees—
She'll not listen to " maybe's " or " buts."

Empty beds galore in Queen and Vic.;
Where shall I go to-night?
Ship and Shovel or the Miller,
Or a moonlight country ride
With my night nurse by my side?

That concluded the morning half of the programme, and all repaired to their various wards to a well-earned lunch, in preparation for the visit to the medical wards in the afternoon.

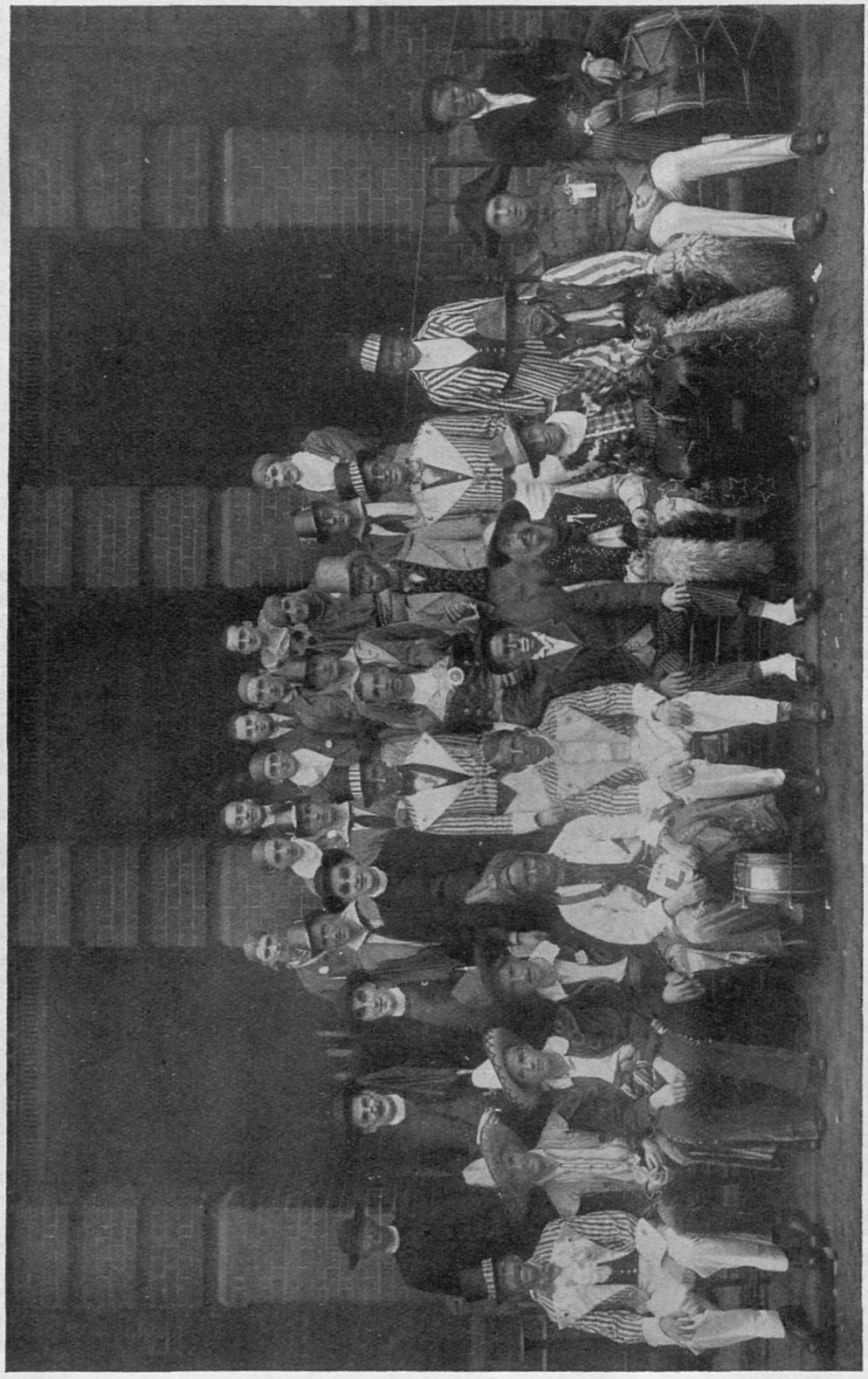
After the interval an attempt was made to get an audience with the children at the party in the Out-patients' Hall, and, though very few words were heard above the general run of conversation of the Borough infants, the Niggers may congratulate themselves that they were at least considered objects of interest, and for a while, at any rate, feeding was interrupted. The Animals, in particular, were very well received, and the lifelike horse and equally realistic dog acquitted themselves well in front of this more than critical audience.

Further attempts to get a song over being considered useless, the children were left for others to amuse, and the party made for the Eye Ward. Here the trio of Eye H.S. and the Nerve and Children's H.P.'s repeated their request to talk it over, this time amongst more appreciative audience, and were supported by an even more picturesque version of " I'm an old cowhand " by the R.O.'s, who produced patriotic negligé from the most surprising places.

Messrs. Humby and Musgrove were also called upon, and for once made no reference to Minnie the Moocher, but sang " I ain't got nobody " with equal success.

All the medical wards were visited in turn, but no new songs were sung, save in Mary, where the H.P.'s repeated their comments on Virginia, and also produced the following parody to the tune of " Is it true what they say about Dixie " :—

Is it true what they say about Douthwaite,
Is he quite the most handsome in Town?
Do his patients really like him,



By kind permission of Henry Wayland, S.E.3.

THE NIGGERS OF 1936

And the ladies all adore ?
Does he get his suits on ticket ?
Is his Rolls-Royce paid for ?

Is it true what they say about Marshall,
Is he really so sly as he seems ?
Is his laugh, is his life,
As crooked as his smile ?
If it is then he should make a pile.

Is it true what they say about Hurst,
Are his rounds really subacute combined ?
Does the ghost of Chapaman wander
At night through Mary Ward ?
Do all the New Lodge outcasts
Come hammering at the door ?

Is it true what they say about Cony ?
Have the ladies all got him on toast ?
Is it fear ? Is it pride ?
That's kept him from a bride ?
For he's waited much longer than most.

Is it true what they say about Poulton ?
Have his eyes really bulged from the first ?
Is it gastroscopes or prontosil ?
For all his patients not so ill,
Or has he only copied it from Hurst ?

Is it true what they say about Campbell ?
Has he had that moustache all the time ?
Is it right ? Is it true ?
Doctor Watson had one too ?
Or is he only Chaplin all the time ?

Is it true what they say about Hampson ?
Does he still ask to peep down " Red Lane " ?
Do the children all adore him,
As they sit upon his knee ?
Do the elder ones consult him about their glanduli ?

Is it true what they say about Nathan ?
Has he never done a round at two o'clock ?
Do we wait till it's late,
Till it's nearly half-past three ?
If we do then it's time for tea.

In Clinical, six unrewarded physicians, in unison, or thereabouts, sang " Leave the rest to Nature," and gave us some side-lines on current treatment to the same tune :—

When there's solid lung without a doubt
Geoffrey has the doors and windows out.
Our skill is useless ;
Call the Works Department,
And leave the rest to Nature.

Campbell's *forte* is the cardiac heart ;
He can make it stop and never start.
But if Cupid gets you,
Raises your blood pressure,
He leaves the rest to Nature.

So you see we must resist
The charms of Sister Smith,
And we thought of taking to
A monastery life forthwith.

Osman is a wizard with a Po ;
What his graphs mean
We shall never know.
His great delight,
Torrential diuresis—
And leave the rest to Nature.

By this time all were somewhat weary, and after the tour of the Medical Wards there was a welcome interval to eat tea, kindly provided in the Surgeon's Room by Sister Theatres. After that the three remaining Surgical Wards, Cornelius, Dorcas and Martha, were visited, and in the first the H.S.'s sang some amusing rhymes, of which we quote the following :—

The boss of this ward is a big shot,
I tremble and quake and I get hot.
Oh, she's rather a scream,
Sister Corny, I mean,
It's the gout, not arthritis, that she's got.

We've had many Sisters in Martha,
Some tall, some long, and some shorter.
Now we've got Sister Fish,
She's a cute little dish,
And she's not such a fish out of water.

The day ended in Martha, where both the A.H.S.'s and H.S.'s repeated their triumphs, and Minnie the Moocher was sung for the last time. Christmas comes but once a year, and, fortunately, so do the Niggers, but even the bitterest opponent of this much-criticised entertainment will join with us in thanking the Residents for the amount of time and hard work so generously given to its production.

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The Significance of "H" and "O"

By D. P. King, Esq., M.B., B.Ch.

TILL recently most of us regarded the letters "H" and "O" as something rather abstruse about which the ordinary mortal need worry very little. However, these two letters make a disconcertingly frequent appearance in bacteriological reports on agglutination reactions, and have caused a certain amount of confusion to those who have not had the opportunity of becoming *au fait* with the modern knowledge of the antigenic make-up of the coli-typhoid-dysentery group of bacteria. This article makes no pretence of being either authoritative or exhaustive, but it is hoped that it will serve to explain how much of really practical value has accrued from this knowledge.

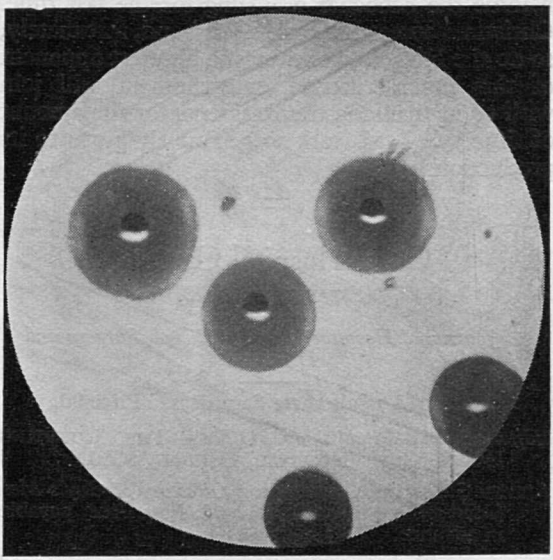
BACTERIAL VARIATION

The work can be said to have begun when Weil and Felix in 1916 reported the discovery of variation in the colony form of the Proteus Bacillus. They described two types of growth, a spreading and a non-spreading variety. They called the former the Hauch* or H form and the latter the Ohne Hauch or O form, and showed that the ability to form a spreading growth was dependent on the motility of the organism, *i.e.*, the presence of flagella.

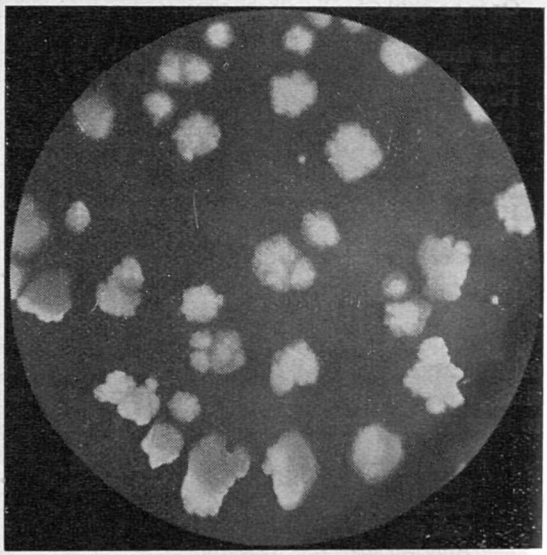
At about the same time Arkwright and others, studying bacterial variation in the coli-typhoid group, found that, whereas pure cultures had always been regarded as being composed of organisms all exactly similar, they would, under certain circumstances, show variations in colony form when sub-cultured. The type of colony which was regarded as normal had a smooth, regular surface, but in sub-cultures there were other colonies with a rough irregular surface. These are illustrated in Fig. 1, but the rough colonies in the photograph are exceptionally irregular, and it is as well to point out that roughness is not as a rule so well marked.

It was thought at first that this change from smooth (S.) to rough (R.) forms was dependent on the loss of flagella, and, as Weil and Felix had used the letter H for flagellated and O for non-flagellated organisms, these two letters were used synonymously with S. and R. respectively. This has caused a considerable amount of confusion in terminology because more recent work has shown that the change from S. to R. is inde-

Fig. 1



Smooth Colonies



Rough Colonies

*Hauch is the German for breath in the metaphorical sense of a "breath of air."

pendent of the presence or absence of flagella and denotes a change in the antigenic construction of the bodies of the bacilli. Thus it is possible to have smooth colonies composed of non-flagellated organisms and rough colonies of flagellated organisms. Analysis of the body (somatic) antigens has shown that they are composed of a central protein complex surrounded by a complex carbohydrate, and it is the loss of the carbohydrate moiety which determines the change from S. to R. As a rule, rough colonies can be obtained by growing the organisms in an uncongenial environment, but, once a given strain has been converted to a rough form, the reverse change to smoothness is difficult to secure.

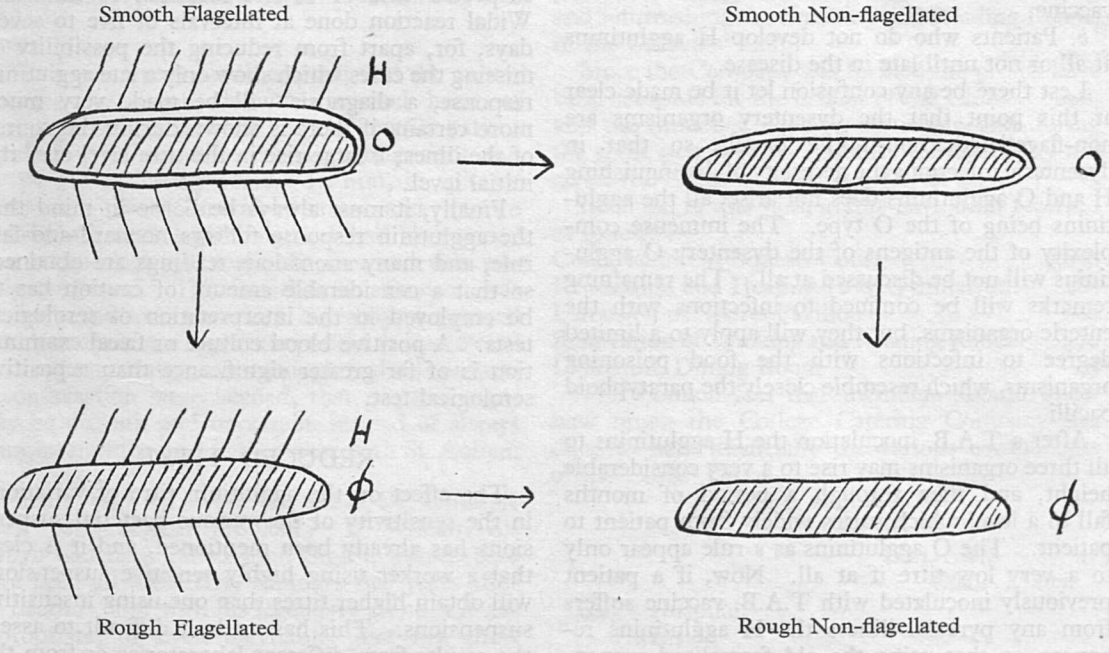
These points can be summarised briefly by saying that the letters S. and R. refer to colony form, while H refers to the flagellar antigens and O to the body antigens of smooth colonies. The somatic antigen of rough colonies is denoted by O with a line drawn through it—Ø. It is hoped that the diagrams in Fig. 2 satisfactorily illustrate these relationships.

The view which is now held is that in any given bacterial culture there is a tendency towards variation, and that the predominance of one or other variant is partly dependent on the conditions which supervene at any given time. In most bacteria smoothness is associated with virulence, but there is reason for believing that the streptococci prove an exception to this rule in that roughness in their case is associated with virulence. The S.—R. variation in the pneumococci is accompanied by a loss of the carbohydrate capsules on which depends their type specificity.

We see, therefore, that studies of bacterial variation have led to a better understanding of the antigenic make-up of the coli-typhoid-dysentery group in which we are particularly interested for the purpose of this article. It is now possible to understand that when a patient becomes infected with the typhoid bacillus he is attacked both by H antigens and O antigens. These will give rise in the blood to the corresponding agglutinins, which can be identified by the Widal reaction. When performing this reaction, it has been the custom to test the patient's serum against a formalised suspension of a simple 24-hour culture of virulent typhoid bacilli. Comparatively frequently a negative Widal was obtained when, from other evidence, there appeared to be no doubt that the patient was suffering from typhoid fever, and had reached that stage when a positive reaction would be expected. It has now been shown that these older formalised suspensions were rich in H antigen, but deficient in O antigen. Therefore, if a patient developed O agglutinins alone, as sometimes happens, the reaction observed

Fig. 2

Diagrams to illustrate Bacterial Variation in the Coli-Typhoid-Dysentery Group



with the formalised suspensions referred to would be negative. It is now possible by means which it is not necessary to detail in an article of this kind to obtain two types of bacillary suspensions, one which is rich in O antigen and one which is rich in H antigen, so that a serum can be tested for each antigen separately. The practical value of this will be discussed later.

Before doing so it is, perhaps, as well to define the term "titre." "The titre of an agglutinating serum is the maximum dilution of the serum which will agglutinate suspensions of the homologous organism under defined conditions of time and temperature." Thus a titre of 1 : 2,000 indicates that the serum diluted 1 : 2,000 with saline will agglutinate a stock suspension of the homologous organism under the correct conditions of time and temperature. The apparent titre of a serum is dependent on the sensitivity of the stock suspension as well as on its content of agglutinating antibodies, so that it is clear that using a highly sensitive suspension the titre may apparently be higher than it would be if a less sensitive suspension were used.

SOME APPLICATIONS

The practical value of the knowledge about the antigenic make-up of the various members of the coli-typhoid-dysentery group is especially evident in the serological diagnosis of :—

a. Patients who, prior to the illness for which they are being investigated, have had a T.A.B. vaccine.

b. Patients who do not develop H agglutinins at all or not until late in the disease.

Lest there be any confusion let it be made clear at this point that the dysentery organisms are non-flagellated, non-motile bacilli, so that in dysenteric infections the necessity of distinguishing H and O agglutinins does not arise, all the agglutinins being of the O type. The immense complexity of the antigens of the dysentery O agglutinins will not be discussed at all. The remaining remarks will be confined to infections with the enteric organisms, but they will apply to a limited degree to infections with the food poisoning organisms, which resemble closely the paratyphoid bacilli.

After a T.A.B. inoculation the H agglutinins to all three organisms may rise to a very considerable height, and then through a period of months fall to a level which varies widely from patient to patient. The O agglutinins as a rule appear only to a very low titre if at all. Now, if a patient previously inoculated with T.A.B. vaccine suffers from any pyrexial illness the H agglutinins reappear, so that using the old formalised suspensions for the Widal reaction, especially if the reaction be tested on one occasion only, it may be difficult to say whether or no the infection is an enteric one. This reappearance of H agglutinins as a result of non-specific infection is known as the anamnestic reaction. Fortunately the O agglutinins do not show this reappearance under the influence of a non-specific infection, so that, if they are present to a significant titre in a case of P.U.O., they indicate that the patient is probably suffering from an enteric infection and not some other pyrexial illness.

The O antigens of the various numbers of the coli-typhoid group are more closely related serologically than are the H antigens, so that agglutinins to which they give rise in the patient's blood cannot be used for making an accurate serological diagnosis. Provided we know from the finding of significant amounts of O agglutinins in a patient's blood that we are dealing with an enteric infection, we are safe in assuming that the organism whose H suspension shows agglutination with the highest dilution of patient's serum is the causative one.

b. There are some patients, perhaps as many as 30 to 40 per cent., who, although they show an early O agglutinin response, never or only late in an enteric infection develop H agglutinins, so that using H suspensions alone instead of both H and O suspensions, a serological test might give a false negative result. This brings us to another point, namely, that it is always advisable in a suspected case of enteric infection to have the Widal reaction done at intervals of five to seven days, for, apart from reducing the possibility of missing the cases which show only a late agglutinin response, a diagnosis will be made very much more certain, if there is shown during the course of the illness a large rise in the titre level over the initial level.

Finally, it must always be borne in mind that the agglutinin response follows no hard-and-fast rule, and many anomalous readings are obtained, so that a considerable amount of caution has to be employed in the interpretation of serological tests. A positive blood culture or fæcal examination is of far greater significance than a positive serological test.

REDUCED TITRE

The effect on the agglutinin titre of variations in the sensitivity of the various bacterial suspensions has already been mentioned, and it is clear that a worker using highly sensitive suspensions will obtain higher titres than one using insensitive suspensions. This has made it difficult to assess the results from different laboratories or from the

same laboratory at different times. Furthermore, it has made difficult the decision as to what should be regarded as a significance titre. To circumvent this difficulty the Oxford Standards Laboratory, under the auspices of the M.R.C., now issue standardised suspensions for agglutination reactions. Every suspension they supply is labelled with a reduction factor such as 4 or 7, by which the apparent titre must be divided to make it comparable with that which would have been obtained if an accepted standard suspension had been used. All their standard suspensions are chosen so that a titre of 1 in 10 is highly suspicious of infection with the homologous organism. Supposing, for example, in a patient who has never had a T.A.B. vaccine or enteric infection, we obtain an agglutination titre of 1 : 200 with a typhoid O suspension and the reduction factor of the suspension is 5, the reduced titre will be 1 in 40, which would be regarded as significant.

We have been in the habit lately of reporting to the wards both the titre found and the reduced titre. This has made our reports rather cumbersome and difficult to follow. We have done this because the reduced titres are, on the whole, lower than those to which clinicians have been accustomed in the past. In future we will report only the reduced titre and then complete the report by a suggestion as to the likely diagnosis on serological grounds.

Correspondence

St. Aubyn's Heart

To the Editor of the GAZETTE

SIR,—Though I cannot rival the fluent words of Dr. Boland, I should like to continue the correspondence about St. Aubyn's heart.

A few months ago, two years after the death of the late Mr. William St. Aubyn, I, too, was told that my diagnosis of aortic stenosis and regurgitation had been wrong and that no aortic disease had been found at his autopsy. I was unwilling to believe this, although I was unaware of the mass of confirmatory evidence so fully set out by Dr. Boland.

Dr. Suzman very kindly investigated the matter further, and found that the reputed heart of St. Aubyn was, in fact, the heart of another patient of mine who had attended as an in-patient and out-patient for many years. In him, in spite of a positive Wassermann reaction and certain cardiac and neurological signs, I had maintained that he had not got aortic disease, and this was duly confirmed. The fact that Dr. Poulton was the only person who had correctly diagnosed mitral stenosis in a syphilitic patient is immaterial for the present argument, though it does confirm, if confirmation were needed, that physcial signs may be difficult and uncertain, instead of always being straightforward as they were with St. Aubyn.

Finally, may we invoke the aid of Dr. Gillespie on a psychological problem? If William St. Aubyn had been called John Smith, would there have been all these false rumours two years after his death? But with his legendary name is it not appropriate, or even inevitable, that his ghost should still frequent the Hospital and need laying?

Yours, etc.,
MAURICE CAMPBELL.

25, Upper Wimpole Street,
W.1.

College Catering Company's Grant

To the Editor of the GAZETTE

SIR,—The Clubs' Union Council desire to express their appreciation and thanks to the College Catering Company for their generous grant of nearly £500, towards the cost of renovating and refurnishing the Smoking and Reading Rooms in the Students' Club.

Since the Company was formed the profits have been set aside for the benefit of the Clubs' Union, and the Students' Club in particular, and during the short period of its existence the Company has given the Clubs' Union over £2,500.

Included in this sum, grants have been received as follows :—

Construction of Squash Court	£650
Renovation and Heating Pavy Gymnasium	285
Extension of Sports Pavilion	800
Renovation of Smoking and Reading Rooms	470
Linoleum, Dining Room	45

The Council feel that members should know how much the College Catering Company has done to help financially the various components of the Clubs' Union.

Yours, etc.,
I. G. ROBIN,
Hon. Sec.,
Clubs' Union.

Guy's Hospital,
S.E.1.

Sport

Rugby

Guy's v. Aberavon

THE visit of Guy's to Aberavon is always a popular attraction, and on Saturday, November 28th, there was a very large attendance to see the home side successful by 2 placed goals and 2 tries (16 points) to a try (3 points).

With Crabbe injured and Wright unable to play, Guy's were compelled to make two changes in the side selected; Drew came into the pack and A. M. McCall made his first appearance in the back division.

The game was one of the fastest seen at Port Talbot this season. Guy's set a terrific pace from the start, but in the last quarter of an hour they tired, and Aberavon scored three tries to which the Hospital responded with a try in the last minute.

Following their success against London University, Guy's gave one of their best displays of the season, and had they maintained the form displayed in the first half, they might have brought off one of the surprises of the day.

After Lewis had been brought down in attempting a cut through, J. Thomas threatened the Hospital line following a fine solo effort, but Guy's fought back and carried play to midfield.

Dick, Steytler and Baxter made repeated efforts to open the game, but Randall Lewis and J. Thomas tackled most effectively and sent Guy's back with good touch-finders.

Lewis and Baxter had a good understanding at half and co-operated well behind the Hospital pack, which had the advantage over a heavier set of forwards.

After stemming several Hospital attacks, Aberavon exploited kick-ahead and follow-up methods, and on one occasion these tactics nearly succeeded, but the ball beat both centres when it went dead.

McCall tackled D. M. James a yard from the line, and from the scrum that followed S. Williams nearly dummied his way over.

Guy's defended magnificently, and kept the home team at bay until a few minutes before the interval, when Vickery and Jones led a grand forward rush and Groom gathered on the bounce, and scored a try which Vickery nearly converted, his attempt hitting the cross-bar.

From the kick-off Guy's attacked vigorously. Kark, Nicholson and Fletcher being specially prominent in the loose, but G. Davies, deputising for T. O. James, was playing at his best and brought off some splendid saves.

Again Guy's set up a hot challenge, and the full-back did well to check a great movement between Crawford, Steytler and Dick. Aberavon retaliated, and J. Thomas made a great run before passing to Randall Lewis, who crossed between the posts, but the pass was forward and a scrum followed.

McCall made another effort for Guy's, and a cross-kick caught the Aberavon defence in difficulties, but they managed to clear.

The home side went further ahead when Vickery gathered and ran through for a try, which he converted.

A fine dribble by Crawford and Steytler looked dangerous, but once again G. Davies came to the rescue. Davies repeated the effort a few moments later, when Nicholson led a fine forward rush which was checked a yard or two from the line. Gradually the home side gained the upper hand, and Rowley did exceedingly well to stop G. Williams and clear with a kick which found touch near midfield.

A penalty to Guy's relieved the situation for the time being, but eventually R. Lewis sent J. Thomas away and the latter cross-kicking saw Vickery following up from what appeared an offside position, and he touched down for another unconverted try.

Rowley was playing a useful game at full-back for Guy's, and on several occasions sent the home team back with long touch-finders.

However, Aberavon kept pegging away, and after Vickery and B. Jones had worked their way into the Hospital 25, the home backs started a movement which ended in Sullivan scoring a great try between the posts for Vickery to add the goal-points.

In the closing minutes Guy's made determined efforts to find a gap. These were rewarded in the last minute when J. W. Lewis slipped round the blind side of a scrum five yards out for a try, which Kark failed to convert.

Team.—H. A. Rowley; A. McCall, R. C. S. Dick (Capt.), J. van A. Steytler, J. P. Crawford; A. B. Baxter, W. J. Lewis; M. R. Kark, E. S. Nicholson, A. J. Drew, J. R. D. Williams, A. Forbes, F. Walt, P. Fletcher and C. S. Darke.

Guy's v. Richmond

ON Saturday, December 5th, Richmond were successful against the Hospital at Honor Oak Park and won comfortably by a placed goal, a dropped goal and 3 tries (18 points) to 2 tries (6 points).

Guy's did not deserve to be beaten by such a wide margin, but after an even and well contested first half they lapsed for the first ten minutes after the interval, and during this period Richmond increased their score by eleven points.

With the exception that C. G. Wright resumed his place in the three-quarter line, Guy's fielded the side which did so well at Aberavon, but, on the other hand, Richmond lacked the services of the regular centres Leyland and Cranmer.

The early stages of the game were mainly confined to the forwards, who had several hard duels with the honours fairly even. Turner, the Richmond scrum-half, tried hard to set his backs going, and, following a scrum in midfield, he sent out a perfect pass to Studd, who ran through to the Hospital line, where Rowley held him up.

In a counter-attack Fletcher got offside and Folker made a good effort to score from near the touch-line, and almost immediately Brooks made an attempt to drop a goal.

Good defensive work by Baxter and Steytler helped Guy's to retaliate with a nice movement between Lewis and Dick, but a pass to Wright ended badly for Guy's, as Butterworth intercepted and managed to cross in the corner after a very good run.

The Hospital forwards then carried out a dashing raid and caught Mennim in possession only five yards from the line. Within five minutes the Hospital drew level when Lewis sent out a nice pass to Dick, who drew the defence before sending Wright in for a try behind the posts, but Kark failed to kick an easy goal.

Butterworth endeavoured to get away several times on the left, but Crawford was ever ready and brought him down every time. A little later Slade kicked ahead and followed up hard, but Crawford managed to get back in time and kick the ball dead.

From the scrum that followed Guy's fought back and took the ball right on to Richmond's line, but Mennim managed to find touch at a critical moment.

Both sides attacked in turn, and the game swung from one end of the field to the other. On one occasion Brooke made a splendid run through the centre, only to be brought down five yards from his objective, and then Dick tried a drop at goal, but the ball failed to rise. After Lewis had stopped a forward rush by the visitors, Studd received a pass from Turner and dropped a fine goal from thirty yards' range.

After the interval Richmond were very aggressive, and quickly added to their lead when Studd intercepted a pass to Dick and sent Delafield in for a try behind the posts, which Folker converted.

Whilst Guy's were attacking in Richmond's 25 Mennim managed to pick up in the loose, joined the three-quarters and started a bout of passing which ended in Cooke scoring behind the posts, but Delafield missed the goal points.

The same player repeated the effort a minute or two later, when he took advantage of mistakes in the Hospital defence to touch down again in an easy position, but this time Slade missed the kick.

After this reverse, Guy's woke up and pressed continuously. First Steytler gained many yards following a neat run through the centre, and then Dick drew the opposition and, when faced by the full-back, passed to Wright, who had a clear run in, but unfortunately he dropped the ball when going at top speed.

Guy's continued their efforts, and then Dick went through on his own and crowned a glorious solo effort with a try, which was unconverted.

Team.—H. A. Rowley; C. G. Wright, R. C. S. Dick (Capt.), J. van A. Steytler, J. P. Crawford; A. B. Baxter, W. J. Lewis; A. J. Drew, E. S. Nicholson, M. R. Kark, A. Forbes, J. R. D. Williams, F. Walt, P. J. F. Fletcher, C. S. Darke.

Guy's v. The Army

AT Honor Oak Park on Saturday, December 12th, Guy's accomplished their best performance of the season when they defeated the Army by a placed goal and a try (8 points) to a dropped goal (4 points).

Although they had played several trial matches against London clubs, this was the Army's first representative game, which was attended by the Army selectors and Mr. D. Drysdale of the Scottish Selection Committee.

The Hospital thoroughly deserved their success, and the result should encourage the fifteen who have not enjoyed the best of luck this season. They were faced with very strong opposition, including a powerful pack led by C. H. Beath, and G. J. Dean and E. J. Unwin, the English Internationals, in the back division.

Guy's made three changes; owing to injuries to Crabb and Fletcher, Finnegan and Sharp were included in the pack and Birks came into the centre in place of Steytler, who has gone on holiday to South Africa.

It would be unfair to mention individuals, as every member of the side did his job well and worked hard for the success which crowned their efforts.

There was a definite improvement in the team work, and on this form Guy's have a good side in the making. The forwards were splendid and, with Nicholson hooking at his best, they obtained the ball fairly regularly in the set scrums in spite of the fact that they were up against a heavier pack.

The halves, Lewis and Baxter, played confidently and had a better understanding, with the result that the backs had many more opportunities of showing their skill.

Rowley played a sound game at full-back and improves in every game—he is a fearless tackler and kicks well.

Although on the heavy side, the ground was in good condition, and when the Army kicked off a mist which threatened to get thicker cleared when rain fell before the interval.

The Army quickly established a footing in the Hospital's 25, and several passing movements looked threatening. On one occasion Marriott punted over the line and Sharp did well to gather and clear. Guy's tackled their men splendidly, and eventually replied with a good movement which carried play to midfield.

Eventually Baxter sent out a pass to Birks, and the latter gave Dick the opportunity to bring out his best. After a run of twenty yards he flashed past Glass and feinted to pass to Wright, but swerved inside, gave the dummy to the full-back, and scored a spectacular try too far out for Kark to add the goal-points.

Guy's nearly added to their score five minutes later when the Army were penalised for offside, and Kark's kick fell a yard short.

A movement started by Dean and Glass nearly led to a score for the visitors. After working his way from his own 25 to well inside Guy's territory, he sent Unwin away on the wing, but Wright tackled him magnificently within three yards of the line.

A fine clearance by Rowley set Guy's on the offensive, and Baxter, Birks and Dick swept down the field in great style, and Hennell saved a certain try when he cleverly marked a short punt ahead by Dick.

The Army fought back and gave the Hospital several anxious moments. Feet up in the scrum brought temporary relief to Guy's, but Glass, Peebles and Dean started another effort for the Army, and Unwin had a clear field, but Crawford caught him in a great race and brought him down. A little later Unwin was again dangerous when he cross-kicked in the Hospital's 25, but in their excitement to score the Army knocked on and a golden opportunity was wasted.

Guy's retaliated, and a huge kick downfield was followed up by Baxter, who caught Hennell in possession only five yards out, but, although the forwards fought hard on the line, they were unable to cross, and the interval arrived with Guy's clinging to their slender lead.

The second half opened with the Hospital launching attack after attack, and for several minutes the Army line was subjected to a terrific onslaught. However, Hennell eventually relieved the situation and, following several good movements on both sides, the Hospital back division started passing thirty yards out, but Birks failed to hold a slippery ball and Glass intercepted and ran through for forty yards before passing to Powell-Brett, but once again Wright stopped the winger near the line. However, from the scrum that followed the ball was passed smartly to Glass, who dropped a neat goal.

The Army kept up the pressure and the Hospital defended magnificently, and, after ten minutes' hard gruelling, Guy's fought back and Dick found touch near midfield. The visitors appeared to have expended their energy and began to tire, and Guy's gradually took up the offensive. Eventually the backs were set going, and Baxter, sighting a gap in the defence, went through it at an amazing pace, and Dick had to go all out to accept the pass which enabled him to cross for a glorious try behind the posts, which Kark converted.

The enthusiasm of the spectators encouraged Guy's to greater efforts, and scrum after scrum was fought out on the Army's line. The Hospital tried hard to push their opponents over, but could not quite manage it, and in the last minute Powell-Brett made a last desperate effort with a brilliant run down the left wing, but his pass inside went astray.

Team.—H. A. Rowley; C. G. Wright, R. C. S. Dick (Capt.); P. H. Birks, J. P. Crawford, A. Baxter, W. J. Lewis; D. P. Finnegan, E. S. Nicholson, M. R. Kark, A. Forbes, J. R. D. Williams, F. Walt, E. C. Sharpe, C. S. Darke.

Hospital Information, etc.

Appointments

S. N. Tinkler, appointed Honorary Assistant Dental Surgeon to Walsall General Hospital.

Births

LLOYD-STILL.—On December 21st, 1936, at 27, Welbeck Street, W.1, to Vera, wife of Captain R. M. Lloyd-Still, Indian Medical Service—a son.

WESTLAKE.—On December 27th, 1936, at 1 Victoria Road, Deal, to Dr. and Mrs. H. J. W. J. Westlake—a son.

Deaths

HODGSON.—On December 14th, 1936, at Orpington, Victor James Hodgson, M.R.C.S., L.R.C.P., D.P.H. (Camb.). Aged 70.

JUDGE-BALDWIN.—On December 24th, 1936, at Cheltenham, Dr. Frederick Benjamin Judge-Baldwin, of angina pectoris. Aged 83.

EDS. { M.A.P. / A.G.W.H.

GUY'S HOSPITAL GAZETTE

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PASSIM

IT is with very great pleasure that we learn that His Majesty King George VIth has graciously consented to become the Patron of the Hospital. It is a source of gratification that we are still connected with the Royal Family, whose interest we so greatly prize; we are indeed fortunate in that we have been associated with the Sovereign, as Patron or President, continuously since the beginning of the century, with his late Majesty King Edward VIIth, with his late Majesty King George Vth, with his former Majesty King Edward VIIIth, and now with our present King.

The new President of the Hospital, Lord Goschen, is especially to be welcomed in his new office, since he has been associated with the Hospital for so long. He first became a Governor in the year 1903, and for fourteen years, from 1910 until 1924, was Treasurer, being succeeded by Mr. Whitbread, on the occasion of his leaving to take up the post of Governor of Madras, a position which he held until 1929, during which year he was also, for six months, the Viceroy and Acting Governor-General of India.

We offer our most cordial welcome to Viscount Goschen as our President.

IT is seldom that we are able to congratulate a member of the Staff on his Golden Wedding, and we offer our warmest congratulations on this event to Sir William and Lady Hale-White, who were married on December 30th, 1886. Sir William was the son of the famous author who wrote under the name of Mark Rutherford. Mark Rutherford wrote with a certain austerity and a plain strength of thought, and, like many writers of his time, it may be that he is not in vogue with the generation of to-day, but he was a writer of lasting qualities, and all good Guy's men have read "The Revolution in Tanner's Lane," "Catherine Furze," the "Autobiography" and the "Deliverance."

Lady Hale-White is a sister of the late Sir Alfred Fripp, and thus has a double association with us through her family.

Sir William became an Assistant Physician in 1886, a full Physician in 1890, and a Consulting Physician in 1917. Apart from his degree of Doctor of Medicine of London University and his Fellowship of the Royal College of Physicians, Sir William has had the honorary distinctions conferred upon him of Doctor of Medicine at Dublin, Doctor of Law at Edinburgh, and Fellowship of the Royal College of Physicians of Edinburgh. He has been a President of the Royal Society of Medicine, and is a Colonel of the R.A.M.C. He was also Chairman of the Queen Mary's Royal Naval Hospital at Southend-on-Sea.

Lady Hale-White is associated with numerous charitable organisations, and has given most welcome help to the Hospital through the Ladies' Association.

Our debt to Sir William and Lady Hale-White is still further increased by the fact that they have decided to commemorate their golden wedding by a most generous gift of a thousand pounds for the purpose of endowing a bed in the Hospital. It is their preference that this shall be in a medical ward, as indeed seems most appropriate to a bed which will keep in our memories the name of one of the greatest of the great Guy's physicians.

We shall but be re-echoing the feeling of all at Guy's when we heartily congratulate Sir William and Lady Hale-White on their golden wedding, and the Hospital must indeed be grateful for the splendid gift with which they have commemorated this great event.

WITH great regret we record the deaths of several Guy's men and one former Sister here. Dr. Gordon Cameron died in Nuffield House on January 4th at the age of 34, and Mr. M. K. C. Shrapnell, a medical student, died in the Brompton Hospital on Boxing Day following an operation.

Obituary notices of these and several other deaths, together with an appreciation from South

Africa of the late Mr. Richard Roberts, appear elsewhere in this number, and we would offer to their relatives our deepest sympathy.

THE sum of money raised by the Appeal Fund is now £77,687 19*s.* 11*d.*, exclusive of Lord Nuffield's conditional gift of £80,000. The percentage of those who have replied to the communications sent them has risen to 4, a fairly good figure, the Secretary assures us, in undertakings of this kind. The percentage cost of the Appeal is, to date, about 12. There have been no large donations since the magnificent sum of ten thousand pounds given for the reconstruction of the Dispensary by the Bernhard Baron Trust, and indeed, we have come, they tell us, to a bad period of the year for subscriptions. There's the Income Tax, and Schedule A (or B).

But we are grateful for some old silver which was lately sent, and which was sold for weight, and an offer has been made of a litter of pedigree Kerry Blue pups. And this afternoon the grateful but astonished Appeal Secretary received two donations with messages somewhat more terse than usual. One was "A Dimpled Kiss at 3*s.*", and the other was "A week-end off—half a sovereign."

In addition to the sum total of seventy thousand pounds odd, there are promises outstanding to the value of £14,346 2*s.* 2*d.* And there are various activities planned for the future.

After the Coronation, some time in June, the Hospital is to hold a dinner at the Guildhall, at which it is hoped that Royalty will be present. Mention of the Coronation reminds us that there is a number of seats for viewing the procession in the possession of the Appeal Secretary. These are in the Ground Floor windows of British Industries House, Oxford Street (the former Gamages' building, near the Marble Arch). The seats have been arranged so that, even should they have the misfortune to be placed behind a six-foot obstacle, the spectators will be able to see to within 2 feet of the crown of the road. All the seats should have a perfect view, as there are only three rows in each window. There are thirty seats available in the second and third rows at fourteen guineas each, and there are fifteen seats available in the front row at seventeen guineas each. Applications for these should be addressed to the Appeal Secretary, and will be dealt with in strict rotation.

ELSEWHERE in this number we publish a list of those members of the Fellowship class who were successful at the Final examination recently, and, whilst we extend our sincere congratulations to them all, whether they received their medical education at this Hospital or another, whether from this country or our Dominions beyond the seas, it was with the greatest delight that we learnt of Mr. P. W. Clarkson's success in his first attempt at this examination.

Until June, 1936, Mr. Clarkson was an editor of the *Gazette*, and, though we miss his forceful personality in writing these columns, it is gratifying to know that the College of Surgeons appreciate his ideas as much as we did, and to us at least it was no surprise when he joined the very select group of those who have been elected Fellows while still Residents in this Hospital.

Mr. J. E. Spalding gained the same distinction earlier in the year, and perhaps it is a reflection of the high standard of surgical teaching in the Hospital to-day that two such achievements should be recorded in the same year, but Mr. Spalding has not let it rest at that, and in the November examinations for the London M.B. we learn that he obtained honours in Medicine. Such versatility calls for our deepest admiration, and we wonder which of the various examining bodies he will attack next.

THE Residents' Play this year will be performed in the Physiological Theatre on the evenings of February 9th to the 13th inclusive, and those who desire to have tickets allotted to them should apply to Mr. F. L. E. Musgrove in the College as soon as possible.

Those with a memory for dates will realise that this year the play has had its run increased by 25 per cent., but the fact that an extra performance is being given on Saturday, February 13th, does not mean that the play is considered to be any better than usual, or that an unusually large audience is expected, but merely that the recent architectural improvements in the theatre have greatly decreased its seating capacity. However, to those who cannot sit easily and to those who do not conform anatomically to the curious curves designed by the bench-maker, we would hasten to whisper that the new seats are almost comfortable.

There is also another innovation this year in the shape of a souvenir programme, containing not only the words of the songs, but also a short history of the Residents' Theatricals ever since their inception. This will be sold at the modest price of sixpence a copy, and will include the chance of winning a valuable prize through the lucky number.

BAKER STREET has changed, ulsters are out of fashion, and no longer in that famous thoroughfare can one hear the clatter of the hansom cabs on their way to Lord's, but, even to-day, we are told the Post Office receives letters addressed to Sherlock Holmes, and we ourselves, tiring of the

By kind permission of Bertram Park, London

Sir William Hale-White, M.D., F.R.C.P.

somewhat commonplace detective stories of modern days, often re-read the adventures of that super-sleuth and his amiable, if not always brilliant, companion, Dr. Watson.

For these two characters, more than any others, we feel that Sir Arthur Conan Doyle will be remembered, and a few years ago Dr. Campbell gave a series of lectures on his researches into the life of Dr. Watson which, if their value was limited clinically, were certainly more interesting and at least as instructive as many that we have heard in the same theatre.

Later, these lectures were published in the form of a booklet, which provides a most stimulating biography of Dr. Watson, who, though he achieved no great academic distinction, has probably been one of the most talked of physicians ever. A few copies of this booklet are still available, and may be obtained from the *Gazette* office, price one shilling.

USING the Editorial privilege to its full, we enjoyed ourselves immensely during the week after Christmas, visiting all the wards in turn and, by a happy coincidence, managing to arrive just at tea-time in every one. However, it was not only buns that we were after, and during our tour we were struck by the great variety of entertainment offered to the patients and would express our thanks to all those who worked so hard to make these concerts successful.

Space does not allow us to mention them all, but in Cornelius, where perhaps we dallied longest, Mr. Charles Harrison and part of his well-known Roosters Concert Party had the Balkan beams shaking with their attempts to sew on buttons, and we were glad to see amongst the audience Mr. Philip Turner, apparently enjoying life as much as ever.

In Martha, the Southern Railway Audit Accountants' Department gave a concert, and tenor and baritone alike recalled many old favourites, including "Glorious Devon," without which we suppose no such entertainment would be complete. In Addison we saw a wizard produce flags of all nations with great ease and do some surprising things with a piece of rope, whilst in Christopher we saw a shoal of tap-dancers of assorted sizes.

In the new Victoria, and needless to say we do not mean the cinema, we met Mr. Charles Harrison again, still sewing on buttons as funnily as ever, and we listened anxiously for the sound of tearing stitches during the peals of perineum-splitting laughter. He was followed by some graceful dancing by Miss Pinchard and her pupils, who performed a pleasing ballet and restored the customary atmosphere of tranquillity to mother and child alike.

Besides those which we have mentioned, there were many excellent concerts throughout the Hospital, and we are extremely grateful to the many talented artists who provided them.

WE are happy to report that the sale of Christmas Cards given to the Hospital by Messrs. Ash & Co., Ltd., has resulted in the sum of £99 15*s*. 9*d*. being added to the funds. We would express our deepest appreciation of Messrs. Ash's generosity.

Obituary

DR. GORDON GOULD CAMERON

GORDON CAMERON'S sudden death on January 3rd at an early age came as an unexpected blow to the many Guy's men who have happy memories of him. Gordon was quite unlike the majority of medical students. During his student days at Guy's his interests were far more centred in literature, art and music than in the subjects of the medical curriculum. In addition he was an athlete of no mean order, and I well remember his arriving at Zetland House as a new student with one of the largest golf bags I have ever seen. He quickly gained a reputation as a first-class rugger forward in the days when Guy's rugger was at its peak. Keen though he was on games, he had no exaggerated ideas about the importance of athletics.

Gordon was very keen on the beauties of Nature and particularly loved the Scottish Highlands. He was an indefatigable walker, and I well remember a holiday in 1926 in Perthshire with Ernest Sears, Trevor Owen and Gordon. He could walk faster uphill than anyone I ever knew, and when the rest of the party arrived panting at the summit of the West Perthshire mountains, Gordon had been waiting at the top for ten minutes or more.

With his wide interests and striking vitality he quickly became the intimate friend and companion of many who, like myself, were many years his senior. He was a delightful companion for a week-end, whether the object was walking, golf, or sight-seeing, and there must be many of his friends and contemporaries who look back on holidays spent with him as some of the happiest days of their lives.

Though as a student he took little interest in

medicine, he had an extremely good brain, and when he ultimately decided that it was time to qualify he passed his Final examinations with surprisingly little difficulty. After qualification he was house-physician at the West London Hospital, and it was at this time that he became really interested in medicine, and quickly showed that he had plenty of clinical acumen. Later he went into practice in London and rapidly attracted patients. During the last few years his professional work cut him off, to a considerable extent, from his friends at Guy's, but he changed very little, and almost my last memory of him was a batchelor dinner in his home with myself and Bobby Plowright as guests, at which he seemed almost as young as in the days when he first came to Guy's.

To many of us his death has been the snapping of a link with a happy past, but he remains a treasured memory.

J. J. C.

MALCOLM KENYON CHARLES SHRAPNELL

WITH profound sorrow we record the death on December 26th of Malcolm Kenyon Charles Shrapnell, who was attached to Dr. Marshall's firm as a medical ward clerk. He died at the Brompton Hospital, where he had recently undergone an operation on his chest, and to those of us who have worked with him, his death has been a very real loss; the more tragic because, in spite of the severity of the operation, all seemed to be progressing so well until his sudden collapse.

Malcolm Shrapnell entered Guy's in October, 1934, from Colfe's Grammar School, where, besides playing a prominent part in athletics, he had gained a scholarship and had also passed the intermediate examination for the London B.Sc. He passed the Second M.B. in March, 1936, and followed the usual run of clinical appointments, and at the time of his death had reached the stage of first three-months' medical ward clerk. It seems a pity that a career that promised so much should end so tragically, and to his mother and family we convey our deepest sympathy.

K. R. T.

DR. SIDNEY SEYMOUR WALLIS

THE death occurred on November 30th of Dr. Sidney Seymour Wallis, at Bromley, Kent, aged 68. Dr. S. S. Wallis was educated at Blundell's School and came to Guy's in 1888. That year and for several subsequent years he played in the rugger fifteen as full-back. His photo appears in several of the groups in the "Spit." He was a contemporary of "Fatty" Allport and Fripp (afterwards Sir Alfred). He left Guy's for a year or two, but came back and qualified in 1895. He leaves a widow and three children.

J. D. W.

DR. JOHN HARE PHIPPS, D.S.O.

(Reprinted from the "British Medical Journal")

NEWS has reached this country of the death at Mosman, near Sydney, of Dr. John Hare Phipps, D.S.O. The eldest son of the late Dr. George C. Phipps, of Manchester, he was born there in October, 1871. From Rossall School he went to study medicine at Owens College, Manchester, and afterwards at Guy's Hospital, qualifying M.B. (Lond.) and M.R.C.S. and L.R.C.P. in 1897.

After acting as house-surgeon at the Stockport Infirmary and St. Mary's Hospital, Manchester, Dr. Phipps went to New South Wales in 1901, and took up practice, becoming surgeon to the Mater Misericordiæ Hospital in North Sydney.

During the war he served in the Australian Imperial Force as lieutenant-colonel commanding the 5th Field Ambulance and was awarded the D.S.O. He had been a member of the British Medical Association throughout the whole of his professional life.

MRS. K. B. ALEXANDER

ON Monday, December 21st, 1936, at the Putney Hospital, there passed away Jane Wise, beloved wife of Dr. K. B. Alexander, formerly of Cambridge, Cape Province, South Africa, and of Old Lodge, Byfleet.

She was known to her generation as Nurse Creighton, who became Sister Out-Patients, and later Sister Stephen, until the outbreak of the South African War called her to the country's service together with a large number of civilian

nurses and doctors. In January, 1900, she was appointed Sister of the Princess Christian Hospital Train in London, and sailed for the Cape. On arriving at Cape Town the Royal train was ordered to Durban, and was soon busily engaged in the evacuation of the sick and wounded from Ladysmith shortly after its relief. Thereafter it remained on the Natal side for the remainder of the war, and when Pretoria was captured made regular journeys there from Durban with the exception of one trip to Capetown and periodical visits along the malarial-infested line east of Pretoria as far as Koomati Poort, on the Portuguese border.

Sister Creighton fortunately maintained her health throughout her two years' war service, ultimately returning to England at my request in 1902, when, after a further short period of duty again as Sister Stephen, she finally left Guy's for the more important and, in her case, no less arduous duties of matrimony.

The first twenty-eight years of our married life were spent in South Africa. Her devotion to nursing never left her, and this, combined with her courage and resourcefulness, was invaluable to me and the community, especially in the early years when conditions of life there were very primitive and the modern amenities of civilisation unavailable.

During the period of the Great War, she acted as secretary of the Red Cross Society at East London, and when the calamitous influenza epidemic of 1918 swept through that country the amount of work she did was almost incredible. The strain of this was enormous, and her health afterwards was never quite the same.

The greater part of her last six years was spent at Byfleet, Surrey, where she still took an active interest in everything, but failing health and suffering rendered it necessary to seek expert medical advice after a while.

She was ever grateful, as I am, to members, past and present, of the Guy's Staff for the kindly attention always devoted to her and for several months of good health which she was able to enjoy through their efforts before the recurrence occurred which proved fatal.

She leaves a daughter and two sons with me to mourn her loss. The younger son, P. C. Alexander, recently qualified at Guy's.

K. B. A.

The Principles of Manipulative Treatment

A Clinical Lecture delivered at Guy's Hospital on 21st December, 1936, by T. T Stamm, Esq., F.R.C.S.

GENTLEMEN,—I do not feel that I need apologise for speaking to you again on the subject of manipulative treatment, for, when used in suitable cases, this method gives more rapid, more dramatic and more satisfactory results than any other method of surgical treatment employed at the present time. Indeed, in many cases a cure can be effected only by these means, while in others the period of disability may be greatly curtailed. Although, unfortunately, the subject is not yet included in the examination syllabus, it is most important that you should have a working knowledge of its essential features, otherwise you will in the future force many of your patients to employ unqualified practitioners, to their detriment and your own. Although a real knowledge of the subject can only be acquired from practical experience, its principles are founded upon a definite pathological basis, with the principles of which you ought to be familiar.

The principles of manipulative treatment depend primarily upon three facts :—

1. That the efficient and painless functioning of the various constituent parts of the body is dependent upon their free mobility upon one another.

Where a great degree of movement is necessary, the structures are separated from one another by a smooth membrane, *e.g.*, synovial membrane, peritoneum, etc. Elsewhere structures are held together by connective or areolar tissue, which by virtue of its elasticity still permits a considerable range of movement of one structure upon another.

2. That following any kind of trauma, whether it be mechanical or infective, there is a tendency to the formation of fibrous tissue in or around the affected structures.

As examples of this may be cited the mass of adhesions which follows an attack of appendicitis, the scarring and fibrosis which occurs after any operation, and the adhesions formed by an organising hæmatoma after a severe sprain of a joint. This newly-formed fibrous tissue, in contradistinction to normal areolar tissue, is inelastic, and therefore limits or prevents the free movement of one structure on another and so interferes with their function. Moreover, when movements are attempted, pain will be caused by the tension produced in this scar tissue. When considering movement in relation to function, one must not only think of joints, but of all structures—muscles,

ligaments and viscera, and even nerves and blood vessels.

3. That the cure of such conditions is dependent upon the restoration of the normal mobility of the tissues.

The aim and object of manipulative treatment is to break down or stretch the fibrous tissue which is binding structures together and limiting their free mobility. It must be stressed that manipulative treatment by itself does not restore function, but it does make that restoration possible. It is therefore not necessarily a cure in itself, but an essential first step by which a cure is made possible.

It will be noted that nothing has so far been said about structures being out of place, or about the subluxation of joints. Manipulative treatment directed towards the cure of such conditions forms a very minor part of the subject. Almost the only structures that get " out of place " are the intra-articular cartilages of certain joints, such as the knee and temporo-mandibular joints, while unreduced subluxation of joints is an uncommon phenomenon.

From what has been said it is now possible to infer in what conditions manipulative treatment is likely to be of service. A few of the more common conditions will now be considered :—

1. *Injuries.*—Injuries to bones, joints, muscles or ligaments are always accompanied by the formation of a hæmatoma around the damaged part. This hæmorrhagic effusion soon becomes diffused throughout the surrounding tissues, and must be either absorbed or else organised into scar tissue. There is therefore always the liability in all such injuries for the various structures to be bound together by the formation of scar tissue, which, by its inelasticity, will prevent their free movement. Indeed, directly or indirectly, this factor is much the most important in determining the extent of ultimate disability from any such injury, for the resulting stiffness prevents the muscles from functioning to the full, and leads to muscular wasting ; this in turn causes a sluggish circulation through the region concerned and the attendant ills of so-called post-traumatic œdema, effusions in joints and so on. This scar tissue is never absorbed to any appreciable extent. Manipulative treatment, therefore, by breaking down the obstructions to movement, affords the only means by which a cure is made possible. As an example consider the common condition of a sprain of the ankle, following which the patient complains of persistent pain. This pain is almost always due to the presence of adhesions at the site of the original ligamentous tear, which are put on the stretch by certain movements of the ankle. So long as these adhesions are present the pain must persist, and, as a matter of fact, indeed often does so for years after the original accident. By a manipulation, these adhesions are broken down, and as they can then no longer be put on the stretch the pain is immediately relieved.

2. *Fibrositis.*—Fibrositis, or inflammation of fibrous tissue, whether it be in the ligaments of joints, in the fascial planes, or in the fibrous sheaths of muscles or nerves, follows the same characteristic course. It begins with an attack of inflammation of sudden onset, and this attack may be repeated at intervals, resulting in the gradual binding together of the affected tissues by minute adhesions, associated with the presence of the fibrositic nodules and bands with which you are familiar. The presence of these changes causes the persistence of certain of the symptoms even when the inflammatory process has subsided completely. Not only will these symptoms persist so long as the nodules and bands are present, but the presence of these changes predisposes towards recurrence of the acute attacks in the future. A complete cure can only be effected when these nodules and bands have been broken down.

3. *Rheumatoid Arthritis.*—In this and other similar conditions, such as diplococcal arthritis, a considerable amount of periarticular and even intra-articular fibrosis occurs. It cannot be too strongly emphasised that a large proportion of the eventual disability, after the disease itself has completely died out, is due to the limitation of joint movement caused by this fibrosis, which, as well as grossly interfering with function, effectively prevents the wasted muscles from regenerating. The restoration of some degree of movement to the joints is therefore the first essential in treatment before any real improvement in the function of the limb can be hoped for. As an example consider a patient who has a stiff knee following an attack of rheumatoid arthritis. The muscles of the limb will be markedly wasted and atrophic. As a result the circulation will be sluggish and there will be no proper secretion of normal synovial fluid to lubricate the joint. All attempts at movement will produce pain due to the stretching of the numerous adhesions present and due to the lack of lubrication. By reflex inhibition the pain in turn causes further atrophy of the muscles. By gentle repeated manipulation some degree of movement can be gradually restored. Concurrently the muscles can now be exercised over the range of movement obtained, and will regain some degree of tone ; the circulation will therefore be improved, toxic waste products being absorbed and synovial fluid secreted of more normal consistency. Such treatment often results in remark-

able improvement in cases otherwise regarded as hopeless.

4. *Osteo-arthritis.* — Osteo-arthritis presents a similar problem to that of the later stages of rheumatoid arthritis. As well as the obvious changes which have occurred in the articular ends of the bones, as seen by X-rays, there are parallel changes in the capsule and synovial membrane. Intra-articular adhesions are particularly common in osteo-arthritis, and by reason of their attachment to synovial membrane they are often very sensitive. The pain on movement in an osteo-arthritic joint is more often due to such changes in the soft parts of the joint than to changes in the bones. The breaking down of these adhesions by manipulation may relieve all the pain in an osteo-arthritic joint which shows advanced changes on X-ray examination.

5. *Chronic Postural Strain.*—The ligamentous structures of the body are designed to prevent excessive movement, and not to withstand continuous tension. When subjected to continuous tension, they always suffer, and this is shown by the onset of pain. In cases where the body mechanics have become deranged, the strain of weight bearing, normally taken by the muscles, may fall upon the ligaments, which soon become painful. The cure of such conditions depends eventually upon the re-education of the neuro-muscular mechanism, so that a normal attitude may be regained and the tension on the ligaments relieved. In long-standing cases, however, the faulty attitude may have become fixed. In such cases it is clearly impossible to restore a normal attitude until mobility of the parts concerned has been restored by manipulative treatment.

Two questions now arise : (1) How is it possible to tell at what stage manipulation may be indicated, and (2) what are the dangers and contra-indications to this form of treatment ?

Although a knowledge of when to manipulate can only be gained by practical experience, certain generalisations can be made. Manipulation is primarily a treatment for chronic conditions. It may be said in general that this form of treatment is indicated in cases where, as a result of some trauma in the past, symptoms persist—symptoms which may be due, in part or in whole, to the loss of free mobility of the affected parts as a result of the presence of scar tissue or adhesions. In many cases the diagnosis is obvious, but in others the limitation of movement may not be easy to detect by examination, as I shall explain later. In such cases reliance must be placed upon a carefully elicited history of the case, in which the character of the pain is one of the most important points.

Three common types of pain are met with in the condition of which we have been speaking :—

1. The continuous " boring " ache of bone disease.

2. The pain associated with chronic or subacute inflammation.

3. The pain associated with tension upon normal or abnormal structures.

In the second type the pain is of a continuous nature, present during rest as well as during activity, but both the pain and the stiffness tend to be worse on resuming activity after a period of rest. The symptoms then diminish for a short time with continued activity, but soon reappear with increasing intensity. A boil on the neck affords a common example which most of us must have experienced. The pain is present continuously, even during rest, but on first rising in the morning the whole neck feels exceedingly stiff and sore. This works off after a short time, but as the day advances the pain gets gradually more severe again.

In the third type the pain is usually absent during rest, for the strain is thereby relieved, but gradually comes on with activity, and is always worst at the end of the day. It is when cases are exhibiting this type of pain that manipulative treatment is usually indicated.

Certain important contraindications to this form of treatment must now be considered :—

1. Damaged structures always require immobilisation for proper healing to take place. Except in cases of unreduced dislocations or subluxations, no manipulative treatment must be undertaken until healing is complete. If this rule is not obeyed, the partly healed structures will be traumatised afresh, causing further bleeding, and the process will begin all over again.

2. As a corollary of the above it may be said that granulation tissue resents the trauma that results from movements, and should be protected from it until it has either been absorbed or else organised into fully formed fibrous tissue.

3. Manipulation must be avoided on all inflammatory cases so long as the inflammation is still present, or definite harm may follow. In order to avoid such misfortunes certain danger signals must always be remembered. Manipulation is contraindicated in all cases where the parts are warm, red or tender, where pain persists during rest as well as during activity, and where spasm is marked. Provided that all these points are borne constantly in mind, it is safe to obey the slogan, " When in doubt, move," for continued rest will lead you nowhere, while movement will either cure or else make temporarily worse ; in either case you do know then just where you are.

There are, however, certain conditions in which manipulative treatment, far from doing good, does actual and positive harm. Tuberculous conditions, whether active or quiescent, old cases of suppurative arthritis, and cases of malignant growths must never be manipulated on any account whatever.

Certain points in connection with the actual performance of the manipulative treatment now remain to be discussed. It is proposed by manipulation to move passively, not only the joints, but also on occasion other structures, such as the muscles, upon one another, so as to break down the adhesions between them and restore their mobility. In order that this may be accomplished it is essential that the parts concerned be completely relaxed. It is mainly for this reason that an anæsthetic is often required, for, when performed upon relaxed tissues, the treatment is not, as a rule, painful. Manipulation cannot be effectively performed in the presence of muscle spasm, for the whole force exerted will be expended in overcoming the spasm, and may actually damage the muscles while leaving the contracted tissues unaffected.

The technique of the manipulation of joints on the one hand and of muscles and fascial tissues on the other differs, and each will therefore be considered separately.

MANIPULATION OF JOINTS

In order to break down all the adhesions which may exist between the articular surfaces of a joint, or in its capsule and synovial membrane, it is clearly essential to move the joint throughout the whole range of all its movements. To do this one must know what movements take place at any particular joint. This may sound elementary, but I doubt whether many of you realise all the movements which take place, for example, at the wrist joint. It must be remembered that as well as the movements which can be performed voluntarily by the contraction of the muscles, there is a further range of movement in nearly all joints which cannot be performed actively. In the wrist joint the active movements consist of extension, flexion, abduction, adduction and circumduction. Many other movements, however, can be performed passively on this joint, *e.g.*, rotation, backward and forward gliding, and sideways gliding of the carpus on the radius. It is these involuntary movements which are of particular importance in manipulative treatment. A patient can usually overcome for themselves any limitation of movement in the active range. They cannot, however, by voluntary effort overcome the stiffness of the involuntary movements. It is just for these cases that manipulation is essential, and it is in these same cases that the limitation of movement is most difficult to detect, for there may be no loss of movement in the active range.

After any manipulation the patient must be encouraged to keep the movements going by exercises. Reactions must therefore be avoided, or the subsequent pain will prevent the patient from doing the necessary exercises. For this reason it is always better to do too little rather than too much—the manipulation can always be repeated when necessary. A good rule to observe is to limit the manipulation to the breaking down of the " first row " of adhesions in each direction.

MUSCLES, LIGAMENTS AND FASCIÆ

In many cases adhesions may exist between muscles, or between them and adjacent fascial planes. In such cases mobilisation cannot be effected by the manipulation of the joints, and other means of freeing the structures from each other have to be adopted. Deep massage, whereby the affected structures are directly moved upon each other by the fingers of the operator, is generally the most effective method. It is of especial value in cases of chronic fibrositis where the easily palpable bands and nodules can be tackled separately and gradually broken down. It is important in fibrositic cases not to do too much at one sitting or quite a severe general reaction may follow, presumably as a result of setting free toxic substances from the nodules. Faradism is another useful method whereby single muscles or portions of muscles can be made to contract separately and thus free themselves from adjacent structures. In all these cases the preliminary application of heat is useful to allay muscle spasm, soften the tissues and reduce pain.

A consideration of these facts leads to the adoption of a definite plan of action in dealing with any particular case : the joints are mobilised first by manipulations either with or without an anæsthetic. This may have to be repeated once or twice. When this is well under way the remaining adhesions in the muscles or fasciæ are tackled by deep massage and Faradism, without anæsthesia. The treatments are repeated at intervals of not less than a week, and are preceded by the application of heat and, in sensitive cases, light massage to allay spasm. In the intervals between treatments active exercises are given to maintain the regained mobility. Finally a course of special exercises is given with the object of restoring normal function.

Notes on Hospitals and Medical Schools in the United States

By J. J. Conybeare, Esq., M.D.

THE visitor to the United States who is familiar with the larger teaching hospitals in England cannot fail to be struck by the grand scale on which so many of the American hospitals and medical schools are planned. This is particularly true of the larger and better-known institutions, such as the Cornell Medical Centre and the Columbia Medical Centre in New York and the Johns Hopkins Hospital in Baltimore, and, to a less degree, the medical institutions in Boston. At any rate, until the financial crash of 1930 the tendency in America was completely to demolish the older buildings and to replace them by larger units, which often embodied several older institutions. Thus in his report for 1934 the President of the Mount Sinai Hospital in New York writes: "Because a few of our buildings are new we sometimes are prone to forget that the central part of the hospital was constructed nearly forty years ago, while important additions thereto are from thirteen to seventeen years old. To keep this plant in a safe, sanitary and up-to-date condition calls for an increasing amount of expenditure for maintenance." It is difficult to imagine what the President of Mount Sinai would think of a hospital such as Guy's, where none of the wards—if we except Nuffield House—are less than one hundred years old, and where at least half the hospital wards date from over two hundred years ago.

Another feature which will strike the English visitor to the United States is the large number of beds allocated in most hospitals for private or "semi-private" patients. In America, nursing homes in the English sense are practically non-existent, and both the rich, the poor, and the intermediate class are cared for when sick in the same institutions. Thus in 1934 in the New York Hospital (Cornell Medical Centre) there were 563 general beds, 133 private beds, and 78 "semi-private" beds. In other words the private and semi-private accommodation was nearly 40 per cent. of the general beds. If this proportion of paying beds was applied to Guy's, there would be approximately 250 paying beds as compared with the existing 80. Moreover, the tendency in America during recent years has been still further to increase the number of beds for paying patients, especially as regards the "semi-private" class.

In the more recently built hospitals in America the layout of the general hospital is in striking contrast to that which is usually found in England. Whereas in this country the public beds are normally disposed in large wards containing between twenty and forty beds, in the United States seldom more than 60 per cent. of the public beds are in open wards, and the balance are in smaller rooms containing four, two or one bed each. With this arrangement it is easy to segregate special types of case such as pneumonia, tuberculosis or Grave's disease, and the risk of widespread intercurrent infection is minimised. It also has the advantage that dangerously ill patients can usually be accommodated in smaller rooms, and deaths in the open ward seldom occur.

More adequate provision is made for the professional staff than is found in most English hospitals. Attached to each ward unit there is usually a small laboratory for the use of house-officers and students. There are also adjacent rooms for special investigations, which necessitate the use of bulky apparatus. Sometimes even a waiting-room is available for relatives and visitors, a welcome contrast to the wooden benches on corridors and landings which so often have to fulfil the same purpose in our own hospitals.

If the newer hospitals in the United States are strikingly different in their material aspect to our own, there is an even greater difference in the organisation of the professional staff. In most of the best-known teaching hospitals in America, such, for example, as the Johns Hopkins, the various important services, such as the medical, surgical, gynæcological and obstetric, are usually under the sole control of a single person, who holds the post of chief of the hospital service and professor in the medical school. He is ultimately responsible not only for the care of the patients, but also the teaching of the students and the conduct of research. Attached to the chief and working under him are a number of assistant or associate professors. As a rule, neither the chief of the service nor his assistants engage in private practice, or, if they do so at all, the greater part of their time and energy has to be devoted to their work in the hospital and medical school, for which they receive a salary. In some medical schools the staff are on a part-time salaried basis and are allowed to see paying patients at the hospital only.

Apart, however, from the whole- or part-time salaried professional staff, there are a very large number of visiting staff who work mainly in the out-patient department and to a less extent in the wards. The total number of visiting staff is

quite remarkable when judged by the standards of British hospitals. Thus in the medical department alone of the New York Hospital there are over 150 doctors on the visiting staff, exclusive of house-officers, graded as follows :—

Physician-in-Chief	1
Consulting Physicians	3
Attending Physicians	8
Associate Attending Physicians	9
Assistant Attending Physicians	20
Physicians to Out-Patients	36
Assistant Physicians to Out-Patients ..	76

It might be thought that it would be difficult to find work for such large numbers. Their employment is, however, rendered possible by the large number of special out-patient clinics for the study and care of certain groups of diseases. In most of the larger hospitals clinics are held for gastro-intestinal diseases, allergic conditions such as asthma and hay-fever, cardio-vascular disorders, pulmonary tuberculosis, nephritis, diabetes, syphilis, dermatology, disease of the thyroid, arthritis, and endocrinology. Neurology is sometimes under the supervision of the professor of medicine, but more often it is an independent department. In some of these special clinics there may be as many as ten assistants, who work under the supervision of a more senior physician. Naturally the number of patients seen by any one individual is small, but the cases are very intensively studied.

From the teaching point of view the system of numerous specialised clinics has its disadvantages compared with the large general out-patient clinic, which includes patients suffering from practically all types of disease. On the other hand, the segregation of special types of disease undoubtedly results in more effective treatment from the patients' point of view, and from the research standpoint it more readily provides ample material. Some clinics are staffed by members of several different services. Thus at the Presbyterian Hospital in New York there is a gastro-duodenal clinic, in which members of the medical, surgical, pathological and radiological services take part in the study of the organic diseases of the stomach and duodenum. Many of these special clinics have developed from small beginnings and have grown steadily as additional workers have been attracted to the clinic. Most of them are held at least twice a week.

Although in the more important departments, such as medicine, the professor is salaried and works on a full-time or part-time basis, the great majority of the visiting staff receive no remuneration. While they devote several half-days a week to hospital work, they are in private practice, sometimes as general practitioners, but more often as specialists in some particular branch of medicine or surgery.

It is undoubtedly true that the American public is more " medically minded " than are the inhabitants of this country. It is not at all uncommon for persons who are in perfect health to have a thorough routine examination carried out annually, either by their own physician or by an institution, such as the Life Extension Institute. Moreover, most educated persons in America are familiar with methods of investigation such as X-ray examinations, basal metabolism, or electrocardiography, and the patient is more ready to submit to, and in fact often demands, manifold investigations, which in England it is difficult to get the patient to undergo. As a consequence there are, at any rate in the larger cities, more numerous specialists than are found in an English town of comparable size. Thus in the United States few parents will allow their children to be under the care of a medical man who is not a professional pædiatrician. Similarly, a patient with diabetes will nearly always insist on being under the care of a physician who specialises in this subject. The same thing applies to many other medical conditions such as asthma, tuberculosis or arthritis, and the same principle holds good in the surgical specialties.

The interest displayed by the educated public in problems of health has been a factor in providing the enormous sums of money which have been required both for the foundation and endowment of hospitals and medical schools. Moreover, in the United States the hospital is a more real and tangible institution to the well-to-do than it is in England, for most of them have been inmates of private wards at one time or another, and their children have been born there. Relatively few of the inhabitants of Mayfair could give with any exactitude the whereabouts of even such famous institutions as St. Bartholomew's, Guy's or the London Hospital, and not one in a hundred have ever been within their walls. In New York, on the other hand, most of the population of similar social status have themselves at some time been patients. This fact has led to the provision of what seem to us in England donations of enormous amounts. These are, or rather were, often given by rich patients who have benefited by their treatment. As an example may be quoted the Brady Institute at the Johns Hopkins Hospital, which was founded and endowed by " Diamond Jim " Brady, as a mark of his appreciation for successful treatment in the Johns Hopkins. Similarly, very large sums have in the past been made available for medical education and research. It is felt, however, that the day of such munificent

gifts and endowments is passing, if indeed it has not already passed. In the United States the scale of taxation on really large incomes dwarfs even that which is current in Great Britain. The President of the group of hospitals in New York, known as the Columbia Medical Centre, writes as follows in his report for 1934 :—

" Looking ahead, we must inevitably conclude that the day of large legacies and gifts is over, that income from endowment will not be restored to former levels, and that more and more the hospital must look to operating income for support."

The financial situation is, indeed, a serious one. Most of the larger hospitals, at any rate in New York, show deficits which would make the Governors of similar institutions in London tremble. Thus for the year 1934 Mount Sinai Hospital showed a deficit of nearly a quarter of a million dollars (£50,000). Even worse, the group of hospitals included in the Society of the New York Hospital (Cornell Medical Centre) showed a deficit for 1934 of three-quarters of a million dollars (£150,000). Legacies, donations, payments by patients have all fallen away during the past five years, and although reviving prosperity in the United States may do something to ameliorate the situation, the outcome must remain a precarious one.

Expenses in American hospitals far exceed those in comparable English institutions. Thus in the Presbyterian Hospital the daily average cost per ward patient was in 1934 8.19 dollars, that is nearly 60 dollars (£12) per week. A similar figure for London teaching hospitals is between £4 10*s*. and £5. Thus the average costs of hospital maintenance are nearly two-and-a-half times in New York what they are in London. While it must be admitted that in New York the standards of physical comfort for the patient are far greater than in London, so also is the cost, much of which is accounted for by the far higher wages, which have to be paid to administrative, nursing and domestic personnel. Without doubt in many, if not in all, directions the New York hospitals show to advantage over their British counterparts. The wards are better appointed, better lighted, heated and ventilated. Separate accommodation is provided for dangerously ill patients or for those suffering from contagious disease, such as " open " pulmonary tuberculosis. Facilities for thorough investigation and special treatment are provided more efficiently. The number of resident house-officers is on an average double that at teaching hospitals in London. Case records of patients are more complete and more readily available. Out-patient departments are better staffed and patients do not have to wait for hours before receiving attention. A higher proportion of the nurses working in the hospitals are fully qualified. The work of the medical staff is rendered easier by the provision of adequate secretarial assistance. Dieticians are at hand to instruct the patient how to carry out the regime advised by the physician. The services of a large social service department are available. " Follow-up " departments enable the medical staff to keep track of their patients.

One of the features which will strike the visitor from abroad most forcibly is the invariable courtesy and hospitality which is shown him when he visits hospitals or medical schools in America. This needs to be experienced to be believed, and perhaps accounts for the fact that few medical men from Great Britain who visit the United States fail to pay a second visit.

The Elements of Infant Feeding

By E. Clayton Jones, Esq., M.B., B.Ch.

AMONG other odd jobs which the general practitioner or his *locum* may be called upon to carry out is that of medical officer at an Infant Welfare Centre. I have known men who would greet an impacted breech with a superior smile, but who came out in a cold sweat when faced with the prospect of advising the assembled mothers at " The Welfare." Now this seems to be rather a pity, because, although the higher flights of infant feeding are only for the great ones whose names are inscribed on the covers of the heavier textbooks, the everyday problems can be solved by anyone who can do a crossword puzzle. The beginner is apt to be appalled by the intricate methods suggested for dealing with *sick* children, and does not realise how simply healthy children can be fed. It may be said that for the poorer mother a complicated regime is doomed from the start, and that the doctor's advice must be simple or she will follow granny's. These considerations provide an excuse for the following utterly elementary and entirely unoriginal notes on this subject. Perhaps some cold sweats will thereby be avoided.

BREAST FEEDING

This method possesses obvious and undoubted advantages over any other; it is cheap, fairly foolproof, there is little risk of the milk being contaminated with pathogenic organisms, and it suits 99 babies out of a hundred. Hence it is a good rule never to take a baby off the breast unless you must. Mothers often feel sure that their milk is not suiting their baby, but they are nearly always wrong. It is the quantity and not the quality of breast-milk which is likely to be at fault, so, whenever there are signs suggesting that a breast-fed baby's feeds are not suiting it, it is wise to arrange for it to have "test-feeds" throughout one day to see how much milk it is actually taking. The result will often be a surprise both to doctor and mother. The child should be having $2\frac{1}{4}$ to $2\frac{1}{2}$ ounces per lb. body-weight per day. If it is having too little, try to boost up the mother's supply by attending to her general health, nourishment and home worries, make her take a pint of milk daily and a drink of water whenever she is feeding the baby. If the deficiency is considerable, give complementary feeds after the breast feeds, allowing enough to make the total daily intake a little less than the calculated requirement. A good feed for the purpose consists of equal parts of boiled cow's-milk and water with a teaspoonful of sugar to each two ounces of the mixture. If the child is having too much milk, and you will have some difficulty in persuading the average mother that this is a possible cause of fretfulness, order the *baby* a drink of water before each feed to satisfy its thirst and shorten the time it is put to the breast. In either case have another day's test-feeds done a week later to see whether your treatment is being successful.

ARTIFICIAL FEEDING

Here a certain amount of exact knowledge is extremely useful, as each mother has a method of her own or of her neighbour's and expects the doctor to advise her when she gets into difficulties with it. Fortunately, certain general principles apply to all methods. In the last paragraph it was remarked that a baby needs $2\frac{1}{4}$ to $2\frac{1}{2}$ ounces of breast milk per lb. body-weight per day, and this is the essential fact which must be borne in mind when ordering an artificial feed or when criticising someone else's suggestions. The total daily requirement is the same, say $2\frac{1}{2}$ ounces per lb., and allow a little more for a thin baby and a little less for a fat one. Having calculated the total daily requirement, divide it by the number of feeds per day to obtain the amount per feed. In general, it is best to give babies weighing less than 10 lb. three-hourly feeds, *i.e.*, six per day, and babies over 10 lb. four-hourly, *i.e.*, five per day, no feed being given between 10 p.m. and 6 a.m. The simplest feeds to order are a cow's-milk mixture, a dried milk or a humanised dried milk. The first is the cheapest and is usually satisfactory. A dried milk has much to commend it, being fairly sterile, easy to prepare and rather more digestible than fresh milk. Humanised milks, in which an attempt has been made to approximate the composition to that of breast-milk (a hopeless task), are expensive but useful, especially in the first month or two of a baby who is a poor starter.

1. *Cow's-milk mixture.*—Most raw milk teems with organisms, some of which are pathogenic, so the day's supply should be brought to the boil when it arrives and then kept in a cool place. The aim is to give the equivalent of $2\frac{1}{2}$ ounces of breast milk per lb. body-weight. This is attained by giving :—

$1\frac{1}{2}$ ounces of milk per lb. body-weight daily.
1 ounce of water per lb. body-weight daily.
1 teaspoonful of sugar per lb. body-weight daily.

Ordinary moist sugar will do very well, and the teaspoonful should be level and Woolworth's size (1 drachm). In addition, give a teaspoonful of cod-liver oil emulsion before three feeds to make up for the low vitamin and fat content of the mixture. Once daily give two teaspoonfuls of orange or tomato juice.

2. *Dried milk mixture.*—Cow & Gate, Glaxo and Ambrosia are those commonly encountered. If a drachm of any of these is added to an ounce of water it is equivalent to an ounce of cow's milk. A drachm measure is enclosed in each tin. It is simple to imitate the cow's-milk mixture given above :—

$1\frac{1}{2}$ measures of dried milk per lb. body-weight daily.
$2\frac{1}{2}$ ounces of water per lb. body-weight daily.
1 teaspoonful of sugar per lb. body-weight daily.

Cod-liver oil emulsion and orange juice must be given in the same way.

3. *Humanised milk.*—Allenbury's No. I and II, Humanised Cow & Gate, Humanised Trufood, Sunshine Glaxo, etc., 1 drachm of any of these with 1 ounce of water is equivalent to 1 ounce of breast milk, so these powders only require dilution :—

$2\frac{1}{2}$ measures of humanised milk per lb. body-weight per day.
$2\frac{1}{2}$ ounces of water per lb. body-weight per day.

No additional sugar is required, but cod-liver oil and orange juice should be given.

In any of the above encourage the use of a proper measure for liquids, as tablespoons are hopelessly variable.

The vast majority of healthy babies will thrive on one or, indeed, on any of the above mixtures, and it is doubtful whether the mortality among babies so fed would be found to be much greater than among the breast-fed.

SOLID FOOD

Most children are taken off the breast or bottle at nine or ten months, and, as it is a mistake to make sudden alterations in a baby's food, it is as well to start starchy foods at about six months. Begin by ordering a few teaspoonfuls of broth or gravy and potato, Robinson's groats, or cornflour pudding before feeds to get the child used to taking things from a spoon. Increase the quantities gradually until three feeds a day begin with half a cupful of one of these. A rusk or a piece of baked bread gnawed at meal-times helps the jaws to develop in an attractive manner. In this way it will be comparatively simple at nine months gradually to introduce a mild imitation of an adult regime, with meals at 8 a.m., 12.30 p.m. and 4.30 p.m., omitting the 10 p.m. bottle and giving a total of about a pint of milk daily :—

On waking.—Rusk and orange juice.

At 8 a.m., Breakfast.—Half-cupful groats followed by half an egg or toast fried in bacon fat and half-cupful milk to drink.

At 12.30 p.m., Lunch.—Gravy or broth with mashed potato and sieved green vegetables, followed by milk pudding.

At 4.30 p.m., Tea.—Bread and butter or rusks and butter followed by some stewed fruit, with junket or custard and a cupful of milk to drink.

Half a teaspoonful of cod-liver oil emulsion should be given before the meals.

SOME COMMON TROUBLES

The wretched welfare doctor is expected to solve the problems presented to him at a speed only equalled by the lightning cartoonist. Fortunately, the same problems keep recurring.

1. *Diarrhœa.*—This is commonly due to infections in the ears, throat, urine or chest, but the presence of blood and mucus in the stools will suggest an actual bowel infection. The "First-Aid" treatment is to give a drachm of castor oil and twelve hours on only boiled water, and this will often clear up the mild case. Breast-fed babies may get persistent diarrhœa if they are being over- or, curiously enough, under-fed. Test-feeds will make the diagnosis clear. Bottle-fed babies get diarrhœa when they are getting more sugar or fat than they can stand. Reducing the sugar in their mixture or changing to a half-cream dried milk is indicated.

2. *Vomiting.*—The same general principles apply where a baby is vomiting as well as having diarrhœa, but if an infant is vomiting and is *constipated* examine it very thoroughly and keep an eye on it. It may have a variety of unpleasant complaints : congenital pyloric stenosis, œsophageal stenosis, an acute obstruction, a cerebral tumour or meningitis. More likely it is only an air-swallower, but it is as well to be on the safe side.

3. *Constipation.*—In hot weather this may be due to simple lack of fluid, and be corrected by giving drinks of water. Otherwise this symptom suggests under-feeding. Failing this, a course of liquid paraffin or milk of magnesia will encourage a return to regular habits. An extra supply of sugar in the bottle or a little extract of malt before the breast will often produce the desired result.

4. *Sore Buttocks.*—These are only syphilitic once in a blue moon. Usually the napkin area is red or actually raw, and the cause is either an acid urine, acid fæces or badly-washed napkins. Some hint may be got from the site of maximum soreness—whether round the penis or vulva, round the anus or all over alike. Acid urine may be remedied by potassium citrate. Any actual diarrhœa will naturally receive attention, otherwise a breast-fed baby's stools may be made less acid by giving extra protein in the form of a tablespoonful of cow's milk with feeds and a bottle-fed one's by giving less sugar. The mother must boil the napkins, must rinse all the soap out of them, and must change them frequently. Locally, olive oil may be used instead of water for cleaning purposes, and zinc and castor oil applied.

5. *Wasting.*—Where a baby insists on losing or failing to gain weight without diarrhœa or vomiting, the procedure is as follows : (*a*) Make certain that it is getting the equivalent of $2\frac{1}{2}$ ounces of breast milk per lb. daily and getting it without too much effort, that is, not taking more than fifteen minutes over each feed. If this is satisfactory, (*b*) make every effort to exclude organic disease—tuberculosis, syphilis, a congenital heart lesion, a chronic urinary infection, etc. Failing this, (*c*) try to obtain more skilful nursing for the child ; there is more in feeding a difficult baby than in refuelling a car.

Correspondence

Clinicals

To the Editor of the GAZETTE

SIR,—As an old Guy's man I have often wondered why the valuable clinical lectures have not been issued in book form. They would constitute an invaluable reference in clinical medicine. Take three of last year: Professor Ryle on the Use of the Five Senses; Dr. Douthwaite on Pneumonia (which might have been amplified); Dr. Conybeare on Diabetes.

May I venture a few remarks on these Clinicals? "The use of the five senses" to-day—as I see medical men, they do not rely on themselves, but if in any difficulty call in another man to share the responsibility, and then off they go to X-rays, blood-counts, and the helps that to-day surround medicals, and yet there has been no diagnosis made. Where would the patient have been in the old days if the medical man had not used his five senses and a few grey cells and made his diagnosis? It is well if a correct diagnosis has been made, but supposing it has not been so; he who uses his five senses is alive to the case, for he is better educated than the man who relies on the help of another man's opinion, for the fact that he has made his diagnosis is his education.

Dr. Douthwaite's lecture on pneumonia is of great value as he emphasizes the point of "absolute rest"; it is the key of success in pneumonia. Temperature of room and stimulants are not so clearly expressed. The temperature of room must be 60° and no draught; efficient ventilation can be obtained by a 4-inch block under the lower sash of window. As a rule, one or two nurses are necessary. That raises the question of nurses. To-day they are taught so much and yet so little of real value. "Ventilate," says the doctor. The nurse, not knowing the meaning of the word, throws open a window and mischief is done. I remember a case of a man, between fifty and sixty years of age, who had pneumonia. The nurses had the window wide open; he had his sheets and night-shirt changed daily. At last, tired out, he said, "If you will leave me alone I shall get better." They did not, and he died.

I remember a very celebrated consultant going into a patient's room, turned to nurse and said, "Shut that window!" She said she had been taught . . . "I don't care what you have been taught. Shut that window!" A very old rule was when the patient breathes through the nose—ventilate; when through the mouth, shut up. A rough-and-ready guide.

As to stimulants, old brandy is of great value when the crisis is approaching, probably the seventh to ninth day. The brandy encourages the critical sleep. The guide to the use of stimulant is the pulse; if it slows under its use you push it, otherwise you withhold it. Absolute silence must be encouraged in the house. It is essential that the doctor commands the case, the nurse obedient on detail, as obedience is the first law of life.

Dr. Conybeare's Clinical on Diabetes is, I think, a classic, and should be studied by every student. He will not find such detail in any book of medicine. It is a Clinical I should have been grateful for thirty years ago.

Yours, etc.,

F. B. JUDGE BALDWIN.

(*H.P., Guy's*, 1879.)

Reminiscences

To the Editor of the GAZETTE

SIR,—Please allow me, as a very old Guy's man, to send you this my letter on Christmas Eve. I think one of the pleasantest moments in my life was when, two mornings ago, I went down the stairs in my dressing-gown, as is my usual custom, to take in the daily correspondence of the household, and found waiting for me on the mat my Jubilee copy of our *Gazette*.

I was at the Hospital when the *Gazette* resumed its being in 1887, having entered as a Preliminary Scientific student on October 1st, 1885. With the greatest interest I read the stories relating to Sir Henry Howse and Mr. Jacobson, for I had the honour of being dresser and acting house-surgeon to both of them. I say "acting" because I took *locum* duty for Mr. Howse's house-surgeon, who was ill.

One of the most humiliating episodes of my stay at Guy's I will now relate.

I was dresser to Mr. Howse at the time and was also "dresser for the week," and, being up late the evening before, was very tired. It so happened that Mr. Howse had sent in his housekeeper to Charity Ward with a bad varicose ulcer of her leg, and I bandaged it rather casually, omitting to make the proper turns in the bandage. Next day I went round with Mr. Howse, the Sister, ward clerk, and the usual crowd of dressers and other students. The fatal moment arrived; Mr. Howse halted, stared at the leg. "Who bandaged this?" "I did, sir." "Then take it off, and do it properly." I wished there was a hole in the floor

of Charity through which I could sink. I took it off and did it properly. And when, some years later, I was beginning practice in Plymouth, I wrote to my old teacher and master for a testimonial as I was trying to get on the staff of the South Devon and East Cornwall Hospital as junior assistant surgeon. Sir Henry Howse, then President of the Royal College of Surgeons, was on holiday at Soldern, in the Austrian Tyrol. I still have and treasure his testimonial. According to him there was only one surgeon in the world worth anything, and that was your humble servant. Of course I got the appointment, and my first step on the rungs of the surgical ladder at Plymouth. Sir W. Arbuthnot Lane also sent me a telling testimonial couched in much the same terms.

Well do I remember " Pulpy's " coat and his short brownish-yellow trousers. We used to say that on the days (few in number) when he failed to put in an appearance at the Hospital, he stayed in bed while Mrs. Howse washed the celebrated trousers. " Pom " was, and is, unforgettable by old Guy's men ; rather austere in manner and strict, but, if you did your work, he never forgot you. All old Guy's men remember the tragedy of his life, when he found his only child (a boy) drowned in the garden. Poor old Jacobson ! It broke him up.

I had better bring this letter to an end, or the Editor will, I fear, consider it too long. But I will add I am proud and glad to sign myself an old Guy's student. I still have my ticket as a perpetual student of Guy's.

Yours, etc.,

H. W. WEBBER,
M.S., M.D.Lond.,
Lt.-Col. R.A.M.C. (T.F.)
(retired).

5, Sandfield Road,
Headington,
Oxford.

More Reminiscences

To the Editor of the GAZETTE

SIR,—In your exceedingly interesting and entertaining Jubilee number you quote two stories of that famous and beloved surgeon, W. H. A. Jacobson. I have not the slightest doubt that any of his old dressers could add many, for " Pom " was unique. Still I fancy the following may illustrate one or two sides of that remarkable character, and I venture to think the yarns too good to be lost.

My first appointment was Assistant Surgeon's clerk, and in those days Assistant Surgeons had but six beds in their charge. In Naaman Ward was an old fellow nearly well, but who needed daily dressings. Pom allowed him home on the understanding that I would go there daily and—" Take a cab, sir, at my expense ; take a cab." As a tram led from close to the Hospital right past the old man's house I disobeyed orders and went by tram. On reporting later that all was well with the patient, the following dialogue occurred :—

Pom.—" How much do I owe you ? "

Myself.—" Well, sir, it's tenpence-halfpenny."

Pom.—" Don't make a fool of *me*, sir."

When I pointed out that it was much less trouble and quicker to go by tram than find a hansom or growler, I was asked what book I would like. As I already possessed his " Operations," I asked for his " Male Generative Organs," to get the astonishing reply, " H'm, I could have understood had it been the female organs " !

Many years later, when I was in practice not so far from Pom's Ewhurst home I met him one day and rather wickedly told him I had done a gastrotomy. He showed some interest and surprise, but when I told him it was on a dog he boomed at me, " God forgive you, sir ! " Another short explanation to the effect that the vet. had refused help and that the dog's life had been saved brought forth, " Don't forget that it's easier on a dog than a human." I didn't.

It would be easy to go on with such stories—true ones—and to tell of the countless kindnesses to the poor of the district. A keen gardener, he grew fine grapes, all of which were given to the sick and poor, and many a bottle of good port, too.

Do you care for just one more story ? It was in my green and salad days ; I had a message to meet him in the Museum and report progress on a case where he had removed half a tongue.

" Had the bowels been opened ? " " No, sir." " Then give him castor oil." " Yes, sir, how much ? " (With a shout) " Give him 5 ounces ! "

Needless to say it went down on the order sheet, not the patient's throat.

Yours, etc.,

C. C. STEAD.

Little Lowman,
Mayfield.

The Missing Link

To the Editor of the GAZETTE

SIR,—A very great deal is being said and written just now about health, physical culture, diets, food, nutrition and the like. But little or nothing is heard of that all-important link between Food and Nutrition—the Mouth !

Food, however suitable, good and abundant it may be, does not (as such) nourish our bodies. It must, first of all, be digested and absorbed into the blood-stream and body tissues.

All our food goes into and through the mouth, and unless this is functionally efficient, will not be properly prepared for easy digestion, thus throwing an entirely unnecessary extra strain upon the internal digestive organs. Again, unless the mouth is healthy and clean, food will be contaminated, and its full nutritive value lessened.

It is well said, " Take care of your mouth and your health will take care of itself."

The mouth has been very aptly described as " the gateway of the body," and the dental surgeon is the guardian of the gate.

The mouth and teeth forming, as they do, so essential a connecting link between food and nutrition, it is astonishing they should be so neglected and abused as to result in more than three-quarters of the entire population suffering from defective conditions in greater or less degree. Many of these defects are serious and the direct and indirect cause of much loss, suffering, malnutrition and disability.

All this is the more surprising as dental disease is to a large extent preventable, and when one reflects that the dental profession has arrived at a degree of knowledge and skill such that defective conditions, when they arise, can be remedied with a remarkable confidence of success.

Prevention actually means to go before, or anticipate, and this leads to thought of the child. Every child can be assured of a good start in this connection, if only their parents would take fuller advantage of the Public Health and Schools Dental Services, staffed, as they are, by dental surgeons specially skilled in the care of children's mouths, and all the problems peculiar to their age and condition that constantly arise.

A child's health can only be as good as its teeth, and, further, if you haven't good teeth as a child you will never have good teeth.

Later, National Health Insurance Schemes take over the responsibility of dental attention, and every endeavour must be made to press for the extention of the scope of such services until the opportunity of complete and constant care and attention is assured from early babyhood to old age.

And what is equally, or even more, important, the very fullest advantage should be taken of the facilities available.

Care of the mouth, and prompt attention to decayed teeth, is the finest of all health insurance against malnutrition and disease, saving both money and suffering.

Yours, etc.,

C. DOSWELL WALLIS.

An Appreciation

To the Editor of the GAZETTE

RICHARD ROBERTS, L.D.S., R.C.S. (Eng.).

WHEN I arrived in London in 1911, bound for Edinburgh to take up a dental course, I was persuaded to remain over in that wonderful city for a week-end. I had an opportunity of visiting Guy's Hospital, was impressed and remained in London.

What a lonely young man I was ! I wonder if anybody reading this can imagine what it meant to a young Boer from South Africa, starting at a big hospital like Guy's, not knowing a soul, in fact hardly knowing a soul in London. It was when I felt my loneliness most that I was fortunate enough to meet a member of the Roberts family, viz., Dr. W. O. Roberts, who started as a pupil in the dental laboratory along with me, after being in practice as a general practitioner for nine years. Very soon after a friendship was started, a friendship which was to mean so much to me, a friendship which has lasted over a quarter of a century. Needless to say, I was introduced to all the members of the family, and not long after meeting Dr. W. O. Roberts (Billy) I was introduced to Richard, affectionately called Dick.

Many a happy week-end was spent at Sevenoaks, where he was in practice. Many an evening we had together in London, and, although quite a few years my senior, he treated me so that to a lonely and at times hard-up student he was a wonderful friend. Blessed with a very happy disposition, a keen sense of humour and exceedingly sincere, he not only was excellent company but a very staunch friend, and nothing gave him greater pleasure than to see and make others happy.

As an operator he was thorough and painstaking ; the essence of neatness, his surgery and workroom were only to be seen to convince anybody that he was a neat worker. Kind and sympathetic to his patients, anxious to learn and improve.

In 1931 my wife and I visited England again. Needless to say we called on Dick at Kendal, Pembroke Road, Sevenoaks ; our friendship was renewed, many happy events recalled, and it naturally was a great shock to us to hear of his early and untimely departure.

We will miss him, but feel honoured to have been included in his circle of friends.

Yours, etc.,

W. J. ROUSSEAU VILJOEN.

Mont Clare,
Bredasdorp,
C.P., South Africa.

Students and Chivalry

To the Editor of the GAZETTE

SIR,—No doubt you have heard the little boy's story, "That's not a lady, Mummy; that's a nurse!" How much more truthful the statement would have been had he said, "That's not a gentleman, Mummy; that's a medical student!"

I will admit that the major part of the nursing staff are strong, healthy young women, but, even so, they belong to the weaker sex, and like to think that "the days of chivalry are not yet o'er."

At the present time, two nurses could move every bed and locker, every screen and chair in the ward, and not a student would raise a hand or offer to help, even if a whole firm were standing about waiting for the Registrar.

Sisters, it seems, are not exempt from carrying screens for those of higher rank. Why should there be such a marked difference between the medical and nursing professions?

Certainly there are exceptions to the rule, and, as is always the case, they suffer with the majority.

Well, men of Guy's, what about it? An improvement in this sad state of affairs will please many more than

Yours, etc.,

ONLOOKER.

Guy's Hospital,
S.E.1.

Reviews

An Introduction to General Practice. By E. KAYE LE FLEMING, M.A., M.D. Published by Messrs. Edward Arnold & Co. *Price 5s.*

AT last there has appeared a small, concise book designed specially to instruct the young doctor who is on the threshold of general practice in his future way of living and to teach him something of the method that he will have to adopt, in private practice, of applying the skill that he has acquired in six long years of training.

This is an excellent book. It would seem strange to the members of any other profession than our own that a qualified man, having spent many arduous years in learning the science of his calling, should be cast upon the world with the scantiest ideas of the method of applying his knowledge in daily practice.

This defect the author of this volume has taken great pains to remedy. He speaks "as one having authority," and makes it his first care to point out to the young general practitioner that his mental outlook must now undergo a radical change—that he must now "look at the man rather than the disease, the vehicle rather than its morbid contents."

This is a book that contains much practical wisdom and everyday philosophy, but it is by no means a mere discourse on the art of practice as were so many of the books previously written round this subject. It contains much valuable technical advice, and should find a place upon the shelves allotted to the books of reference. It gives a clear account of the organisation of the medical services of the country, about which the average doctor knows so little, greatly to his detriment when he meets the ill-informed and argumentative layman. It deals with National Health Insurance work, showing it not as something hardly discussible above-stairs, but as a career, the importance of which will increase in the practice of the future. It gives well-balanced advice as to equipment; the examination of the private patient and the mistakes the most careful practitioner may make; it gives excellent, although perhaps not quite detailed enough, advice on fees, and it discusses the comparatively seldom mentioned subject of dichotomy.

It is indeed refreshing to read a book which deals with general practice as a career to which the student should be trained from the first; as the basis of our whole medical system, and not, as is so often unintentionally conveyed, a dumping ground of failed consultants.

B. W. H.

Reports on Chronic Rheumatic Diseases. Vols. I and II. Edited by C. W. BUCKLEY, M.D., F.R.C.P. Published by Messrs. H. K. Lewis & Co. *Price 12s. 6d. and 10s. 6d.*

THESE two volumes are the annual reports of the British Committee on Chronic Rheumatic Diseases appointed by the Royal College of Physicians and represent an attack on this important problem, long overdue in this country, by teamwork and by experts.

The first volume, which is introduced by Sir Humphrey Rolleston, is mainly occupied in a detailed account of the present state of knowledge. One of the first tasks was to adopt a working classification, for nowhere, save perhaps in nephritis, is there so much disparity and confusion. The danger in dealing with a condition where much is obscure is to cover ignorance by un-

necessary and unjustified classification, and the Committee have wisely suggested a simple working and provisional grouping; this they have amplified, summarising the clinical criteria they have adopted in forming it and carefully differentiating the known from the unknown. The same disgust for terminology which soothes the conscience while obscuring the vision is shown in Dr. Freeman's article on Allergy, for one must agree with him that in many cases this term is "not a gleam of sunshine breaking through, but an extra wisp of fog." The first volume contains assessments and summaries of such aspects of the problem as the biochemical by Mr. Race, the research by Dr. Oriel, the place of focal sepsis by Sir W. H. Wilcox, and the problem as applied to children by Dr. Moncrieff. There is an excellent clinical review of Ankylosing Spondylitis by the editor, Dr. Buckley, and the literature of the year is collected by Dr. Bach.

In the second volume the consensus of opinion on the infective ætiology of Rheumatoid Arthritis is apparent. Prof. Davidson and Dr. Goldie, who would prefer the term "Chronic Infective Arthritis," for this group, stress the similarity to Acute Rheumatism and the known infective arthrites such as Tuberculous. Supporting them, Dr. Griffiths discusses the relationship of the streptococcus, and the importance of the anti-hæmolysin titre and intradermal tests in reflecting the activity of the disease in relation to a primary focus of infection. Dr. Copeman also reviews the problem of so-called Tuberculous Rheumatism which has found much favour on the Continent, and with details of forty-two personal cases and twelve selected from the literature comes to the conclusion that in as much as a third of the cases a low-grade tuberculous infection is possibly a factor and should therefore be more often considered. Dr. Hench of the Mayo Clinic contributes a valuable summary of American views with detailed references to the work being done in that country. With regard to treatment, there are articles on the use of Histamine by Dr. Copeman, on Crysotherapy by Dr. Buckley, and on the treatment of deformity by Mr. Timbrell Fisher, who also reviews the current orthopædic and surgical literature.

When one considers that this chronic rheumatic group of diseases are responsible for so much chronic invalidism and as much as one-sixth of the nation's industrial invalidity, one must welcome the effort which this committee is making and these excellent reports are an obligation and necessity for every physician. They present a statement of the current account of our knowledge, their frankness and variety give ground for much thought and invite criticism which is so necessary, they indicate what lines of inquiry may be profitable, and, above all, they must give a much-needed stimulus to optimism and action in place of the far too prevalent air of resignation and defeat.

C. G. B.

Johannes de Mirfeld—His Life and Works. By Sir PERCIVAL HARTLEY and H. R. ALDRIDGE. Published by the Cambridge University Press. Pp. 191. *Price 15s.*

IT is impossible for us to do justice to this book in a review, for not more than one man in a thousand has the necessary antiquarian knowledge. Johannes de Mirfeld was a Bart.'s man, though the actual position which he held in that institution seems uncertain, but he lived in the Priory of St. Bartholomew Smithfield, in the latter half of the fourteenth century, and his name is indissolubly connected with the hospital by two great works, the *Breviarium Bartholomei* and the *Florarium Bartholomei.*

The authors of this book on de Mirfeld give a review of his life and a discussion of these two of his works, and the book thus becomes an illuminating exposition of the state of medicine in London during the fourteenth century. The attitude of the authors appears to us critical, careful and scholarly, so that one feels confidence in them as historians, but the nature of the subject matter, in itself somewhat remote from present-day reality, was not such as to hold our attention without an occasional rest. But that is a personal idiosyncrasy of our own; for the antiquarian, for those who take interest in medical history, the book assumes quite a different aspect. After the authors' review of the life of de Mirfeld, there is a very ably written section which throws much light to the uninitiated on "that extraordinary welter of ideas, Classical, Arabian, Scholastic and Magical, the aggregate complexity of which is known as Mediæval Medicine."

The authors then treat of the works of de Mirfeld. In both these compilations the *Breviarium* and the *Florarium*, a remarkable feature is the presence of acrostics; in the *Breviarium*, if the first letter of each chapter from Part 2 onwards be written down, there appear the words:— *Ora pro nobis sancte Bartholomee ait Iohannes de Mirfeld ut digni efficiamur promissionibus Cristi.*

And the authors have discovered that the first letters of the ensuing chapters will, in the same way, form a lengthy prayer. And it is a comment on the enormity of de Mirfeld's undertaking that this acrostic arises from only seven of the fifteen parts of the book, which it can thus be seen is a work of immense length. Quotations from the *Breviarium* then follow, with the Latin on one page

and, for the present generation, the translation on the other. The remarks on the Signs of Evil Portent appearing in Feverish and other types of patient are interesting ; opisthotonos is held to be an omen of death, as is the shedding of tears from the right eye of a man or the left eye of a woman. There are some remarkable tests for estimating the prognosis : " Carefully anoint all over the sole of the patient's right foot with lard, and then throw the lard to a dog. If the dog eats it without vomiting the patient will live, but if the dog returns it or makes no attempt to eat it, then the patient will die." And again, " Mix the patient's urine with the milk of a woman who has brought forth a male child ; if the milk and urine mix well together, then the patient will live, but if, on the contrary, they remain separate, then he will die." And in the case of a female patient a woman suckling a female child had to be used. Another surprising clinical rule is the following : " If the first vowel of the name of a patient who has lost an eye or is otherwise mutilated be A or O, then he will suffer in his right side, and if it be E, I or U, then in the left."

There are then some interesting quotations of de Mirfeld's views on phthisis, and among other things a prescription for preparing gunpowder, after which the reader reaches the second great work, the *Florarium*. This contains a similar, but briefer, acrostic, but widely differs in its subject matter from the *Breviarium*. It is a theological work which was intended as a guide to every department of the Christian life. It is, as with the other, printed in Latin on one page with the translation opposite, and among its moral reflections are quotations from widely differing sources, from Lanfranc, Seneca, St. Bernard, Aristotle, Galen and Bernardus de Gordonio. de Mirfeld's opinion of his contemporary practitioners does not appear to have been high.

The book is illustrated with photographs of the original manuscripts, and is well printed and produced. Those who are interested in Mediæval Medicine or who would like to rub up their Latin with a little simple construe will not be disappointed.

The Vegetative Nervous System. By WULF SACHS, M.D. Published by Messrs. Cassell & Co., Ltd. Pp. 168. *Price* 15*s.*

THIS book makes neurology more complicated. It brought home to us, with a slight shock of surprise, how exceedingly little we knew about " the sympathetic." The object of the book, the author states in his preface, is to give the reader a " quick orientation in, and a practical approach to, the whole question of vegetative imbalance."

The subject matter is well arranged ; the author deals first with the development of knowledge of the sympathetic system, and with the evolution of the nomenclature in that connection. There is then a lucid and well illustrated chapter on the anatomy of the vegetative system, followed by others on its physiology and pharmacology.

The reader by the end of this stage will have regained some of what he will have forgotten from the physiology days, and will have acquired a background which affords a means of approach to the clinical, as opposed to the purely academic, study of the vegetative system. The author begins the clinical considerations with chapters on vagotonia and sympathicotonia, and a consideration of vegetative imbalance as a clinical syndrome.

There are then chapters on the examination of the vegetative system, firstly by pharmacodynamic tests, and then by reflexes ; the reflexes are considered in two groups, visceral and dermal. Sensori-motor reflexes of a mixed vegetative and somatic nature are then discussed, and, after a chapter on the relation between the vegetative and the circulatory system, a general review of the clinical significance of the vegetative system is presented.

The book is thus, as a survey of the autonomic nervous system, very complete in its scope. It contains a great deal that was new to us, and told us of a number of reflexes with which we had hitherto been unfamiliar. It is well written, concise and well printed ; the illustrations are excellent ; there is a good index and an admirable bibliography. It is not so much, perhaps, a book for the clinician as for the neurologist or physiologist, but he who is interested in neurology *per se* will find much stimulating matter and some knowledge that he will not ordinarily acquire. " I am not aware," says Sir Walter Langdon Brown, in a foreword, " of any other book which gives information on all these points in so complete and compact a form."

An Introduction to Pharmacology and Therapeutics. By J. A. GUNN. Published by Humphrey Milford, Oxford University Press. Fifth Edition. Pp. 231. *Price* 5*s.*

IT is not very long since extractions of dried mummy, and other such legends of witchcraft, were removed from the Pharmacopœia, but, even so, pharmacology has made many notable advances in the last few years, and it became necessary to revise the British Pharmacopœia in 1932, whilst the United States Pharmacopœia underwent its eleventh decennial revision last year.

Such changes as these naturally demand alterations in textbooks on the subject, and we welcome this new edition of Professor Gunn's well-known book, though, as it has passed through no less than five editions in the last nine years, it seems already too widely read by students to need any introduction from us.

However, pharmacology is an exact subject, and any attempt to give a short account of the more essential facts frequently develops into a dull catalogue of drugs and doses, which makes it all the more remarkable that the author has managed, on two hundred and thirty small pages, to offer more information than we sometimes find in far more pretentious volumes, and yet contrives to keep his account both readable and interesting.

We know of no better book for anyone beginning a study of pharmacology, even if only from the sordid examination point of view, and note with more than passing interest that Professor Gunn now holds the appointment of Director to the Nuffield Institute of Medical Research in the University of Oxford.

Entries, Spring Term, 1937

Medical

Name	*School or College*	*Year*
Bockner, V. Y.	Grocers' Company School	1st M.B.
Cooper, P. R.	Rugby and Oriel, Oxford	3rd Year.
Cuthbertson, P. S.	Royal Grammar School, Worcester	2nd Year.
Pope, W. B.	Cranleigh	1st M.B.
Reynolds, G. L. L.	Winchester and University College, Oxford	4th Year.
Ronchetti, J.	Latymer School, Edmonton	1st M.B.
Russell, F. R.	Polytechnic, Regent Street	2nd Year.
Schwartzman, E.	University College School	1st M.B.
Sharpe, R. M.	Giggleswick	2nd Year.
Smith, R. S.	Repton	1st M.B.
Teubes, M. N.	Jeppe High School, Johannesburg	1st M.B.

Dental

Name	*School or College*	*Year*
Avasia, J. A.	Chicago	4th Year.
Drummond, P. A. B.	Monkton Combe, Bath	1st Year.
Dyer, J. R.	Manwood's, Sandwich	1st Year.
Gartrell, P. C.	Douai	Pre-Medical.
Hudson, W. H.	Hertford Grammar School	1st Year.
Powell, J. A.	Polytechnic, Regent Street	Pre-Medical.
Rankin, J.	Haileybury	1st B.D.S.
Walters, I. B.	Stellenbosch	1st Year.
Webb, G. H. N.	Framlingham	Pre-Medical.
Woodward, T. W. H.	Ellesmere College	1st B.D.S.

Sport

Rugby

Guy's v. United Services (Portsmouth)

THE return match between Guy's and the United Services (Portsmouth) was played at Portsmouth on Wednesday, December 16th, and resulted in a win for the home team by 3 tries (9 points) to nil.

The conditions were about as bad as they could be, the ground was inches thick in mud, and rain fell almost continuously throughout the game.

Both sides were below strength, and the Services kicked off facing the wind and rain.

Guy's started with great dash, and in the first few minutes gave the home side a fright when the Hospital were awarded a penalty in front of the

posts, but, to the relief of the spectators, Kark missed a sitter by failing to lift the ball. Had Guy's accepted this golden opportunity the result might have been different, but, profiting by this lapse, the Services attacked and Elliott nearly dropped a goal.

With the ground so heavy the game developed into a mud-lark between the forwards. Neither side took the game seriously, and after most of the play had taken place in midfield, half-time arrived with no score.

Following the interval the Services took command of the game, and Rowley, in trying to clear, slipped and Elliott was up to score an easy try.

A little later Elliott scored again, following a combined effort between Goldsworthy and Durley. However, the ball was too heavy to land the goal points.

Near the end Aylen finished off a fine forward rush by scoring an unconverted try in the corner.

Team.—H. A. Rowley; C. G. Wright, C. K. Cole, P. H. Birks, J. P. Crawford; A. B. Baxter, J. W. Lewis; M. R. Kark, E. S. Nicholson, H. H. Crabb, J. R. D. Williams, A. J. Drew, C. S. Darke, D. P. Finnegan, F. Walt.

Guy's v. Liverpool

GUY'S made their first visit to Liverpool on Saturday, December 19th, and were defeated by a placed goal and 4 tries (17 points) to a try (3 points).

Owing to a misunderstanding, the Hospital arrived with only fourteen men, Sanders, the full-back, failing to put in an appearance, and consequently Guy's had to take Sharp out of the pack to fill the gap. To add to their troubles, Dick, Fletcher, Crawford and Crabb were unable to make the journey, and McCall, Finnegan and De Gregory were brought in to complete the side.

On the other hand, Liverpool fielded their strongest available side, which included the two Leather brothers, H. A. Fry, augmented by M. R. Bull and W. A. Clarke, of Liverpool University.

In spite of the fact that Guy's were a man short in the pack, the forwards held their own, but Liverpool held a definite advantage outside. Clarke was a continuous source of trouble to the Hospital defence, and with Hooper doing good work from the base of the scrum, Bowman was able to get his back division in action time after time. Guy's confined their efforts to defence, and for a long period the Liverpool threes found great difficulty in making ground.

Time after time Baxter sent them back with well judged kicks to touch, but there were times when he might have opened out the game to advantage by passing to his threes instead of overdoing the kicking.

Liverpool took the lead within five minutes of the start, when Bowman broke away in midfield, passed to Evans, who sent in Smith for an unconverted try.

Guy's nearly drew level when Kark just missed a penalty, but immediately afterwards Evans got away unchallenged and Clarke took his pass to score.

Erratic passing lost Guy's a lot of ground, but the forwards rallied and penned Liverpool in their 25 for some minutes.

Eventually Liverpool revived and a passing movement carried play to the other end. Smith and Bowman were nearly over, but Sharp sent them back and a clever pick-up by Birks enabled him to reduce the deficit with a try, which Kark failed to convert by a narrow margin.

Early in the second half Guy's had a fine opportunity to take the lead when Birks broke through, but he kicked ahead instead of passing to de Gregory, who was in close support.

Recovering from this surprise attack, Liverpool retaliated when Clarke picked up in the loose and run through a weak defence for a try, which Schofield converted.

de Gregory made a good attempt to get through for Guy's, but Bowman was placed in possession by the full-back and dodged his way through the Hospital defence for the best try of the day.

Guy's tired badly towards the finish, and had as much as they could do to keep the home side out. However, in the last few minutes Evans managed to find a gap and he was over for another unconverted try before Guy's realised that he was through.

Team.—E. C. Sharp; J. L. G. Hartley, A. M. McCall, P. H. Birks, R. M. de Gregory; A. B. Baxter, J. W. Lewis; M. R. Kark, E. S. Nicholson, D. P. Finnegan, J. R. D. Williams, A. Forbes, C. S. Darke, F. Walt.

Association

Guy's v. Wellingborough School

GUY'S played Wellingborough School at Wellingborough on December 2nd, and a keen game resulted in a draw of 1 goal all.

Guy's won the toss and played downhill and with the wind. For the greater part of the first half Guy's were on the offensive and play was largely in their opponents' half of the field. After about fifteen minutes, Drew twisted his knee and went to left-half, Lee taking over the

centre-half position. The school forwards played very well together, narrowly missing scoring on one or two occasions. Guy's had many shots, but they were badly directed. However, about half-way through this half the school goalkeeper dropped the ball and Dorr scored from a range of about two yards.

Just about half-time the school made a strong attack and managed to score after the Guy's goal keeper had been unsighted.

During the second half play took place chiefly in the Guy's half of the field and the Hospital had to defend stubbornly. However, Guy's made several attacks, and a shot by James hit the cross-bar and rebounded to the outside-right, who missed with his shot. Towards the end of this half, the play all but developed into "Cup-tie" football. Nevertheless, the final whistle went with the school attacking strongly and with no addition to the score.

Team.—A. D. Whitworth; G. M. Pearson, B. M. Heap; T. R. Jones, D. W. A. Drew, H. A. Lee; J. Jones, L. James, G. W. Dorr, G. C. Sprigings, J. R. L. Goldman.

Guy's v. The Casuals

ON Saturday, January 9th, Guy's played the Casuals at Honor Oak Park and won by 5 goals to 4.

Unfortunately, Guy's had to take the field without several of their regular defenders. The ground was very heavy, but for the first fifteen minutes Guy's swung the ball about and made several attacks. During one of these, Guy's scored through Sprigings.

Gradually the Casuals began to have more of the game and equalised through their centre-forward after weak tackling by the Guy's defence. Soon after this the Casuals forced a corner. Guy's failed to clear the place-kick, and the opposing inside-right scored from a range of about six yards.

However, just before half-time Harvey received the ball just inside the Casuals' half and, out-distancing the defence, scored a great goal from just inside the penalty area. Half-time arrived with the scores level at two goals all.

Soon after the interval the Casuals went ahead, the Guy's defence being caught out of position. Nevertheless Guy's played up hard and soon equalised through Dorr. A few minutes later Drew was injured during a Casuals' attack in which they scored their fourth goal, and he had to leave the field. Pearson went to centre-forward and Bugg was withdrawn from the forwards to play right-half. However, Guy's were not disheartened, and they were unlucky not to score on several occasions.

At length Harvey equalised for Guy's, and soon afterwards Sprigings put Guy's ahead at the second attempt, after having had his first shot saved. Just before full-time Dorr put the ball in the net again, but this was ruled offside.

The play of the Hospital's forwards was much better in this match and augurs well for the future.

Team.—H. Bramwell; N. L. McNeil, C. Halamandres; G. M. Pearson, D. W. A. Drew, F. K. Johnson; D. W. Bugg, R. W. Harvey, G. W. Dorr, G. G. Rees, G. C. Sprigings.

Hockey

Guy's v. Shoeburyness Garrison

GUY'S beat the Shoeburyness Garrison by 4 goals to nil when they met them for the first time at Shoeburyness on December 9th.

Although there had been much rain, the pitch played magnificently. The going was heavy and tested the fitness of the players, but they mastered the conditions and produced some encouraging hockey.

From the bully-off it was obvious that the game was not going to be fast, and the Hospital were missing the inspiration of Franklin as captain at outside-left. The Guy's backs were more than a match for the opposing forwards, and, although there were one or two anxious moments in the circle, the Garrison failed to get through.

Cox was running well on the right wing, and bringing the ball into the circle to shoot, Martin took it in the air and shot the opening goal with a good first-time shot. Roberts showed promising form at inside-left, and scored the second goal just before half-time.

After half-time the Garrison forwards changed their positions, and some good movements resulted, which, against lesser backs, might have let to goals. Guy's, however, still had the better of the exchanges, and Phillips and Martin added goals.

Needham showed signs of eliminating his small jump in the few shots he had to save, Wright played an excellent game at left-half, and both Bough and Cox ran well on the wings.

Result.—Guy's, 4; Shoeburyness Garrison, 0.

Team.—E. J. Needham; J. S. Astbury, T. C. Thorne; E. Smith, A. C. Greene, C. F. Wright (Capt.); B. M. Cox, E. J. Martin, C. H. Phillips, D. G. E. Roberts, G. C. Bough.

Guy's v. St. Thomas's Hospital

GUY'S defeated a weakened St. Thomas's Hospital eleven by 6 goals to nil on Saturday, December 12th, at Honor Oak Park.

For the first twenty-four minutes Guy's were playing without their captain, but the game was even. There was very little mid-field play at this time, attack and counter-attack occurred without intermission.

With the arrival of Franklin, the forward line, which had been playing a very effective game raiding their opponents' circle, produced the necessary *finesse* and Phillips made a good run through the defence to score an excellent goal (1—0). Thus encouraged, Guy's renewed their efforts, and Martin was able to increase the lead to 2—0 before the interval.

In the second half Guy's showed more combination, and the team worked well together. The defence were varying the direction of their clearances well, although they showed a marked tendency to starve Cox on the right wing. Franklin celebrated his return by scoring three out of the four goals; his second was a magnificent shot from a very narrow angle. Martin, as usual, played a very thrustful game, and scored the remaining goal.

The most pleasing features of a disappointing match were the reliability of the backs—although never hard-pressed—the energy of Greene at centre-half, and the penetrative power of Franklin, whose game could only be improved if he varied it with an earlier centre occasionally to give his insides more scope.

The critics on the touch-line were heard to say that wing-halves must not stop the ball with their hands, and that they must feed their wings more.

For St. Thomas's, Blackledge, at centre-half, played a magnificent game, and captained his side well. Guy's should learn to follow the example of his well-placed and carefully thought-out passes.

Result.—Guy's, 6; St. Thomas's Hospital, 0.

Team.—E. J. Needham; J. S. Astbury, T. C. Thorne; E. Smith, A. C. Greene, C. F. Wright; B. M. Cox, E. J. Martin, C. H. Phillips, G. C. Bough, J. B. Franklin (Capt.).

Results.—Played, 15; won, 10; lost, 5; 50 goals for; 20 goals against.

Ice Hockey

GUY'S I v. RICHMOND FALCONS

GUY'S met the Richmond Falcons at Harringay Arena on December 13th and, following a very fast game, the score stood at 4 goals all.

The first period opened with Guy's keeping the Falcons on the defensive for the first five minutes, but this defence was impregnable, and, taking advantage of the open game, Guy's were playing, began clearing to their forwards, who, unmarked, skated fast down the ice, beat the Guy's defence with clever combination and, closing in on Cox, gave him little chance to save. In this manner the Falcons scored four goals, and were robbed of several others by the excellent goal-tending of Cox. The first period ended with the score—Guy's 0, Falcons 4 goals.

The second period saw Guy's alter their tactics, the forward line checking back and Pitt-Payne and Bromley body checking at defence and Groom playing very well in goal.

The Hospital forwards were combining well, and Praat at centre ice drawing the Falcon defence, passed to Simms, who sent in a shot, opening the scoring for Guy's.

The second period ended with the score—Guy's 1, Falcons 4.

The final period opened with Guy's three goals to make up. The Hospital forwards made frequent excursions up the ice, but could not penetrate the Falcons' defence.

Following some play at mid-ice, Ross secured the puck, skated up the ice, was body-checked by the defence, but Head, picking up a loose puck, skated in on the opposing goalie and put a hard shot behind him. The same player shortly afterwards stickhandled around the defence and secured another goal.

Guy's, one goal behind, began playing a four-man attack with one defence man, but the Falcons were letting nobody pass their defence zone and with a one-goal lead were waiting for full-time. Following a Richmond attack, Simms secured the puck from behind the Guy's goal and, going up the ice, skated around the Richmond defence and put a hard shot behind the goalie.

Vigorous hockey was played by both sides in an attempt to get the winning goal, but at full-time the score stood Guy's 4 goals, Richmond Falcons 4 goals.

Team.—Goal: Cox, Groom; Defence: Bromley, Pitt-Payne; Forwards: Hancock, Head, Ross, Simms, Lee, Praat.

GUY'S II v. ST. THOMAS'S II

GUY'S II met St. Thomas's II at Earl's Court Arena on November 25th for the first time this season and won by 5 goals to 3.

In the first period St. Thomas's forwards penetrated Guy's defence and scored twice.

Guy's secured their first goal just before time, Hancock scoring.

St. Thomas's scored once in the second period, and Guy's twice through Head and Lee.

The opening of the third period saw the teams on an even footing. Cushing, Bromley and Everall played well at defence, and Groom was kept busy during this period with long shots from St. Thomas's forwards. Blockley and Hancock each scored for Guy's, who maintained the lead till the final whistle.

Team.—Goal: Groom; Defence: Everall, Bromley, Cushing; Forwards: Lee, Ticehurst, Head, Crook, Hall, Cox, Hancock.

Hospital Information, etc.

Notice

PRIMARY FELLOWSHIP COURSE

A Combined Course in Advanced Anatomy and in Advanced Physiology will be held in common with St. Bartholomew's Hospital Medical College and St. Thomas's Hospital Medical School for the May, 1937, Examination, to which only Students and Post-graduates of the Schools concerned will be admitted.

The Classes will be as follows :—

St. Thomas's Hospital.—February 1st to February 19th inclusive, on Mondays, Wednesdays and Fridays. Physiology 2 p.m. to 3 p.m.; Anatomy, 3 p.m. to 4.30 p.m.

Guy's Hospital.—February 22nd to March 12th inclusive, on Mondays, Wednesdays and Fridays. Anatomy, 2 p.m. to 3.30 p.m.; Physiology, 3.30 p.m. to 4.30 p.m.

St. Bartholomew's Hospital.—April 26th to May 14th inclusive, on Mondays, Wednesdays and Fridays. Anatomy, 2 p.m. to 3.30 p.m.; Physiology, 3.30 p.m. to 4.30 p.m.

Guy's men who wish to join the Course should see the Dean as soon as possible.

T. B. JOHNSTON,
Dean.

Pass List

F.R.C.S.

Pass.

L. O. Aylett
J. Charnley
P. W. Clarkson
S. Clayton
L. Z. Cosin
G. B. Davis
D. C. M. Ettles
A. S. Gray
F. R. Kilpatrick
W. A. R. Nicholson
K. S. Nissen
L. E. Pitt
O. G. Tunks

UNIVERSITY OF CAMBRIDGE.
FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.
December, 1936.

PART I.

Inorganic Chemistry.

F. W. A. Campbell
C. N. Macintosh
N. L. M. MacManus
J. S. Pegum

PART II.

Physics.

F. S. Mellows.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES
Michaelmas Term, 1936.

PART I.

Surgery, Midwifery and Gynæcology.

E. S. Dismorr
R. Edwards
E. B. French
R. C. Neville
G. E. Yardley

PART II.

Principles and Practice of Physic. Pathology and Pharmacology.

B. C. M. Palmer.

UNIVERSITY OF LONDON.
SECOND EXAMINATION IN DENTAL SURGERY.
December, 1936.

PART I.

Pass.

N. S. Harris
J. W. Lee
H. Rees

Anatomy and Physiology only.

H. A. Hall
D. L. Rugg-Easey
P. H. Staple
A. Stone

PART II.

Pass.

*A. G. Beaton
J. C. Coe
D. G. Sharp

* Awarded a mark of distinction.

THIRD EXAMINATION IN DENTAL SURGERY.

Pass.

W. A. Vale.

GROUP I.

R. L. Kenyon.

SOCIETY OF APOTHECARIES OF LONDON.

FINAL EXAMINATION.

December, 1936.

Midwifery.

J. R. Audy *J. M. Lea

* Has now completed the examination.

CONJOINT BOARD.

December, 1936.

PRE-MEDICAL EXAMINATION

Chemistry.

J. Cranfield
A. H. Drewitt
W. O. R. Evans
G. C. Fuller
D. A. S. Harvey
J. A. Irwin
R. N. Lewis
N. A. Power
D. D. L. Rees
J. C. Timmis

Physics.

J. Cranfield
A. H. Drewitt
A. Halamandres
J. M. Hamon
J. A. Irwin
F. J. Piercey
N. A. Power
D. D. L. Rees
J. C. Timmis

Elementary Biology.

R. D. Allen
A. H. Drewitt
J. R. Fleming
A. C. G. Freer
D. L. Gabb
J. A. Irwin
R. N. Lewis
N. A. Power
B. P. Taylor

UNIVERSITY OF LONDON.

FIRST EXAMINATION FOR MEDICAL DEGREES.

December, 1936.

External Students.

P. N. Cardew
C. N. Eastes
P. W. Edward
B. J. Fowler
E. O. Höhn
M. P. Hutchinson
F. R. C. Manning
J. K. Martin
H. A. Ripman
D. G. E. Roberts
B. Rowlatt
J. S. Stead
D. Wright
D. H. Wright

Internal Students.

C. L. F. Beaton
C. M. Dave
P. R. C. Evans
G. C. Foster-Smith
L. R. R. Fourman
L. G. C. Martin
H. P. Merrick
W. E. R. Pitt
A. W. P. Stone
J. Williams

M.D. EXAMINATION.

December, 1936.

BRANCH I.

Medicine.

J. A. Brocklebank
G. A. M. Lintott
B. McArdle

BRANCH IV.

Midwifery and Diseases of Women.

J. W. Schabort

BRANCH V.

Hygiene.

K. Biden-Steele.

UNIVERSITY MEDAL IN LONDON M.S.

J. B. G. Muir.
(Middlesex Hospital)

SOCIETY OF APOTHECARIES IN LONDON.

PRE-MEDICAL AND PRIMARY EXAMINATIONS.

January, 1937.

Physiology.

C. A. Anderson
D. I. Chapman
E. W. Crews

Papers by Guy's Men

Norman Burgess. Pitfalls in diagnosis, Erythematous swellings of the legs. *Med. Pr. and Circ.*, 1936, cxciii, 526.

R. R. Traill. The early diagnosis and prognosis of pulmonary tuberculosis. *General Practice*, 1936, xii, 118.

R. W. B. Ellis. Diaphyseal aclasia. *Proc. Roy. Soc. Med.*, 1936, xxx, 110 (Sect. Study Dis. Childr.).

—— Gargoylism (chondro-osteo-dystrophy), corneal opacities, hepatosplenomegaly and mental deficiency. *Ibid.*, 158 (Clin. Sect.).

—— Chondro-osteo-dystrophy (Brailsford - Morquio type.) *Ibid.*, 160 (Clin. Sect.).

W. H. Ogilvie. Surgical diagnosis. *B.M.J.*, 1937, i, 1.

A. F. Hurst and John A. Ryle. The incidence, mortality and treatment of hæmorrhage in gastric and duodenal ulcer. *Lancet*, 1937, i, 1.

L. J. Barford. The treatment of peptic ulceration. *Med. Pr. and Circ.*, 1936, cxciii, 575.

Hugh Barber. Infective hepatic jaundice. *B.M.J.*, 1937, i, 67.

George T. Hankey. Bilateral perforation of the antrum and nose into the mouth following chronic destructive osteomyelitis of the maxilla. *Dent. Rec.*, 1937, lvii, 10.

W. E. Herbert. Two cases of fracture of the roots of two incisors where the pulps have remained vital. *Dent. Rec.*, 1937, lvii, 12.

W. H. Ogilvie. Abdominal pain. *Practitioner*, 1937, cxxxviii, 73.

A. H. Douthwaite. General practice: VII—The first six months. *Ibid.*, 103.

Changes of Address

Sir Francis Shipway, Shefford Woodlands, Newbury. *Gt. Shefford* 14.

C. K. Simpson, 146, Harley Street, W.1. *Primrose* 6513.

G. F. Hugill, Clevedean, West Drive, Streatham Park, S.W.16. *Streatham* 2442.

Marriages

GRIEVE—BOULLIN.—At Hong Kong, on December 22nd, 1936, Ronald James Douglas Clerk, elder son of the Rev. Canon and Mrs. Grieve, of Largs, to Frances, youngest daughter of Mr. and Mrs. Boullin, of Surbiton, Surrey.

Death

DUNSTON.—On November 5th, 1936, John Thomas Dunston, M.D., M.B., B.S., of Pretoria, Transvaal, South Africa.

Eds. { M.A.P. A.G.W.H.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

WE paused for a few moments the other evening in Maze Pond, just where the ultra-violet glow from the Light Department makes that street seem almost cheerful, to watch the grotesque and shapeless shadows of those basking in the healing rays in an attempt to ward off influenza, and, as we stood before these monstrous reflections, a figure detached itself from the railings and, lurching towards us, announced, with a knowing wink and a little mild regurgitation, that he wanted to give us his blood; in fact he went further, and, with a gesture that included all London, added that he was prepared to give it to us for nothing, so intense was his feeling against the present epidemic of influenza.

It took us some time to ascertain his meaning, but, having overcome a slight postural weakness with the aid of a sympathetic lamp-post, he explained that earlier in the evening he had been told by a friend in a public-house that the Hospital was appealing for the blood of influenza convalescents, and that he would like to be among the first to swell the serum pool.

What it was that stimulated this noble volunteer, we are not certain. It may have been the tragic poster above his head with its empty treasure chest and a wicked pun, or it may have been the leading article in Monday's *Daily Mail*, but, whatever it was, it is evident that the scheme arranged by Dr. Douthwaite and Dr. Knott to attempt to use convalescent serum on a large scale for the prevention and treatment of influenza has aroused wide interest.

It has been suggested recently that if measles can be prevented, or at any rate modified, by the injection of serum obtained from patients recovering from the disease, it is possible that the same result could be achieved in influenza, and in a letter to the *Lancet* last week Dr. Douthwaite and Dr. Knott appealed for donors and samples of blood so that the idea could be tested. They hope that, if enough serum can be collected from those who have suffered recently from an unmistakable attack of influenza, small doses can be given to volunteers among the nursing staff, who have so far escaped the disease, and that by using adequate controls, some idea as to its value in prophylaxis will be obtained. It is also intended, though not, perhaps, with the same hope of success, to inject a series of patients in the early stages of the disease, when, as is the case in measles, some moderation of the attack may be expected.

Up to date, the response to this appeal has produced headlines and a leading column in the *Daily Mail*, a marked rise in the receipts of the Post Office telephones, and over a litre of serum, which we think is a very encouraging result, and feel sure that all our readers will join us in expressing gratitude to all those who so generously co-operated, and in wishing Dr. Douthwaite and Dr. Knott success in their critical investigation.

We understand that the serum has been collected from people in widely differing stations of life, and that inside the Hospital, nurses, massage students, medical students, porters and house-officers have contributed, and it was even thought at one time that a little Editorial blood might be spilt, but, pursuing our policy of strict impartiality, we are not allowed to harbour antibodies against anybody.

A PAIR of eyes gleamed at us the other night when on a subterranean journey, and we recognised our old friend the Dodont, moping about among some of the larger plumbing. The old monster has had 'flu, and we have not seen him for many a day, but he is always worth listening to, and stopped to find out what he was after.

"No, it is not the rats," he groaned. "Though, Heaven knows, there are enough of them about down here; but haven't you heard"—and here his voice sank to a sinister croak. "The Pathologists want to do all the post-mortems."

"But haven't they always done them?" we

replied. "We know Dr. Douthwaite always does them on Tuesdays and we have often heard Mr. Layton in the Post-Mortem Room. We have sometimes seen Dr. Boland do them, too, but nearly always when we go there one or other of the Pathologists is doing them."

"Yes, yes, yes," he muttered irritably. "But Professor Wright wants to start a scheme whereby much more of the tissue is examined *in situ*, and the various histological and bacteriological preparations are examined, correlated and followed up, and, of course, Physicians are too busy for that and the Medical Registrars haven't the time either, so you see it is all very difficult."

"But do the Physicians really want to do post-mortems?" we asked. "Surely they have enough expected of them nowadays, what with rounds, combined and otherwise, as well as Out-Patients, and not to mention Nuffield House?"

But the old villain would not answer that, and went meandering off, muttering about traditional linking of medicine with morbid anatomy, though all we caught was the names of Addison and Bright—but then we know the fantastic creature of old, and he always talks like that when he is pleased about something.

However, whatever it is that our friend has got hold of, we have always felt that the very closest co-operation should exist between Physicians and Pathologists, that whenever possible the Physician (or Surgeon) in charge of the case should attend the Post-Mortem Room, and that all clinical and pathological evidence should be discussed fully between them, but at the same time we feel strongly that a whole-time Pathologist should carry out the actual inspection, for he alone is able to spend the necessary time examining organs *in situ*, eviscerating, and dissecting blood-vessels, preparing specimens, etc., and it must also be remembered that only by constantly doing post-mortems can one be expected to give an opinion of any value on problems of morbid anatomy.

If all post-mortems were carried out in this way, we cannot help but feel that the records would soon become even more valuable than they are now.

Perhaps the Dodont was pulling our leg, but he is rarely wrong, and it seems certain that he must have heard something.

▭

THOSE who read this ripping little paper right through will notice a change in the initials at the end, and it is with very deep regret that we record the retirement of Mr. M. A. Partridge, who has been an editor since February, 1935, and to whom the *Gazette* owes a very real debt of gratitude for his untiring services.

It would be very easy to make a semi-technical journal such as the *Gazette* quite unbearably dull, and perhaps the hardest task of an editor is to weld the matter together into some sort of order, and attempt to make the whole seem interesting by adding a note or two that is not already common knowledge. How far we succeed is not for us to say, and in any case it is quite impossible for us to judge, but if at any time lately these columns have provoked mild interest, or better still a smile, in any of our readers, then they, like us, should feel grateful to Mr. Partridge. For from his facile pen has come all that was worth reading in "Passim," and it was his constant aim to produce some topic of wide interest each fortnight, and avoid that attitude of smug, self-satisfied back-slapping which is so common in columns of this sort. He could polish off a page or so with an ease that was all his own, and his mind, like his clothes, seemed always original.

However, our loss has been mitigated somewhat by the fact that Mr. H. B. O. Cardew consented to fill the vacancy as Assistant Editor, and we feel that no more suitable choice could have been made.

▭

THERE are no married quarters in the College, and it is not often that we celebrate a wedding amongst the Residents, but on Wednesday, January 20th, Mr. G. J. Van der Merwe, Dr. Poulton's House Physician, was married to Miss Rachel Morgan at All Souls' Church, Fulham. Several of the Residents attended the ceremony, and it is understood that Mr. and Mrs. Van der Merwe are leaving for South Africa almost immediately. We would take this opportunity of congratulating them and sending them our best wishes for their future happiness.

▭

AMONG recent improvements in the Hospital, we are delighted to see that several new telephones have been added, and it is now unnecessary for House Officers, who happen to be in the Medical Block, to make a rapid journey, either to the Front Lodge or the College, to receive incoming calls. In all, four new telephones have been installed, one outside Addison, one outside Stephen, and two in the Out-Patient Department, but, unfortunately, owing to a slight miscalculation of the number of lines available, only the one outside Stephen is connected to the night switchboard. This seems a great pity, though, perhaps, not altogether unexpected, but, whilst our knowledge of permutations and combinations is not equal to the task of working out the increased chances of obtaining wrong numbers, we anticipate an enormous saving both in breath and boot-leather.

▭

As was mentioned in the last number, the Residents' Play will be presented in the Physiological Theatre on the evenings of February 9th

to the 13th inclusive, at 8.30 p.m., and the Dress Rehearsal will be on Monday, February 8th, at the same time. Those who would like to have seats allotted to them should apply to Mr. F. L. E. Musgrove at the College as soon as possible.

The fashion for arriving late at the theatres, we believe, has passed, except, perhaps, among surgeons, but, owing to the small size of the Physiological Theatre and the absence of the Lord Chamberlain's restraining hand, an attempt is always made to find seats for as many as possible, and it is of very great assistance to the organisers if the audience manage to be in their seats well before the curtain goes up.

For this reason, a special appeal is being issued on the tickets this year, requesting people to take up their seats before 8.15, and, in case this should seem a trifle cryptic, or but a poor imitation of a very famous conductor, we would explain that our one object is for as many as possible to see the play with the maximum of comfort.

We would also remind those who contemplate seeing the play that a souvenir programme is being produced, and, for the modest price of sixpence, will include a crossword puzzle, the clues of which mostly relate to topics within the Hospital. For the first correct solution to be opened on Monday, February 15th, a prize, consisting of two tickets for the Residents' Ball, will be awarded. Solutions should be addressed to the Editor and marked "Crossword."

THE Residents' Ball will be held this year on Friday, March 12th, at the Grosvenor House, Park Lane, and Mrs. E. C. Hughes has very kindly consented to act as hostess.

Marius B. Winter's Band has been engaged once again, and it is hoped that as many as possible will attend. All Guy's men, past and present, are invited to take tickets, which may be obtained on application to the Ball Secretary, Mr. H. R. H. Harley, at the College, or to any Resident.

NOBODY will doubt the value of carefully constructed sentences, or the ease with which ambiguity creeps in, and a few weeks ago we were guilty of writing a sentence about the Appeal which had half a dozen meanings, but we are glad to see that others make mistakes too, and would quote the following from a local paper :—

"The late Mr. —— was removed to the hospital, where he died on Wednesday last, on the advice of his doctor."

This, of course, has no relation to the "talking drug," or suggestion under the influence of Evipan.

WE congratulate the following on their appointment :—

House Physicians—
To Dr. Poulton—Mr. J. A. T. Griffiths.
To Dr. Marshall—Mr. W. M. Philip.

House Surgeons—
To Mr. Davies-Colley—Mr. J. M. Brown.
To Mr. Slesinger—Mr. G. D. Channell.

Out-Patient Officers—
Mr. B. W. Hunt.
Mr. G. O. Jelly.
Mr. F. R. Malan.
Mr. R. C. Neville.

Assistant House Surgeons—
To Mr. Ogilvie—Mr. A. J. Smith.
To Mr. Grant Massie—Mr. W. F. Dunham.
To Mr. Eckhoff—Mr. P. M. Davies.
To Mr. Brock—Mr. G. E. Yardley.

Resident Obstetrician—
To Mr. Chapple—Mr. A. G. W. Hill.

House Surgeon to the Ophthalmic Department—
Mr. A. L. Young.

House Surgeon to the Ear, Nose and Throat Department—
To Mr. Layton—Mr. G. D. N. Milne.

House Surgeon to the Genito-Urinary Department—
Mr. S. Jackson.

Is There a Science of Psychology*

By R. D. Gillespie, Esq., M.D., F.R.C.P.

AT a meeting of one of the committees concerned with the revision of the medical curriculum it was debated what a statutory course of lectures in psychology should consist of. A member of the committee remarked that, wishing to learn the answer to the question, he had gone to the nearest technical library, taken down half a dozen volumes, labelled "Psychology," by half a dozen different professors, and had obtained half a dozen different answers to the question, "What is Psychology?" A sample of the diversity of answers is found in the contents pages of two recent compilations "Psychologies of 1925" and "Psychologies of 1930," edited by Carl Murchieson. It will be seen that progress is not synonymous with simplification. Indeed, in 1930, with "Russian Psychologies," even a nationalist note creeps in in consonance with the worst modern tendencies :—

* A lecture given to the Oxford University Psychological Society, June, 1936.

Psychologies of 1925.

Schools of Behaviourism.
Dynamic Psychology.
Gestalt.
Purposive Groups.
Reaction Psychology.
Psychologies called " Structural."

Psychologies of 1930

Hormic Psychology.
" Act " or " Intentional " Psychology and Associationism.
Functional Psychology.
Psychological Theories of those whose training background was the Structuralism of E. B. Titchener.
Configurational Psychologies.
Russian Psychologies.
Behaviourism.
Reaction Psychology.
Dynamic Psychology.
" Factor " School of Psychology.
Analytical Psychology.

It was an Oxford man who made the comment I have quoted, and no doubt he had suffered in his education from the obstructive forces that have delayed the establishment of a laboratory for experimental psychology in Oxford until now. Under Dr. William Brown's influence such a laboratory is now available. Oxford, according to C. E. M. Joad, " being largely wedded to philosophy " [although she must have found her spouse change complexion with the years in a rather unusual manner], has always regarded psychology with a mixture of condescension and disparagement. Either, it was said, psychology told us what we did not know, or it invented a special terminology for telling us in technical terms what we already knew."

Few psychologists can plead innocence of this repetition of the commonplace, and none can deny the fact of confusion in diversity, although in this latter respect they might retort that psychology is no worse off than philosophy itself. Those who deny that psychology is, or indeed ever can be, a science, are in a strong position; and it is difficult to see how this charge can be met until psychologists themselves can combine to do it.

What is a science? and how does psychology at present fall short of the possible definition?

The main characteristics of a science are these :—

1. The systematic arrangement of the data of observation.

2. The derivation, from the data of observation of (*a*) certain general rules called hypotheses and then theories and ultimately laws; or (*b*) of as yet undiscovered data; as, for example, the discovery of new chemical elements, or of the existence of hitherto unobserved planets.

3. The experimental verification of the data of observation.

4. The capacity of the data for estimations in a certain unit of measurement. I can remember Sir Charles Sherrington at Oxford in 1923 deploring that the great lack in psychology was the lack of a unit of measurement.

The need of a unit of measurement.—Attempts have, of course, been made at quantification in psychology. The Weber-Fechner " law " for example, stated that the sensation increased as the logarithm of the stimulus. But this remains an isolated example of measurement in a corner of the field. It is true that recently there has been a great bout of mathematical activity in certain parts of the psychological domain, but in important respects these mathematical operations do not rest upon measurement, but on subjective estimates to which numbers are arbitrarily attached, and it is exceedingly doubtful whether the figure that emerges at the end of the operation to which these subjectively estimated quantities are submitted has any relation to the initial subject matter of observation. I am referring here especially to the work of the Spearman school on character traits. Incidentally, even the mathematics of this school are themselves sometimes attacked.

Quantification is being attempted in the strength of instinctive urges in animals, *e.g.*, the strength of an electric shock required to deter a white rat from finding its way to food. In human beings, industrial experiments may be made to measure the strength of incentives; as, for example, beyond what level it is useless to increase wages in order to increase output; or in professional circles, how difficult is it possible to make an examination without drying up the supply of candidates. But those attempts are isolated, and the units of measurement used are going to be hard to generalise beyond the particular experiment for which they are devised.

Subject matter.—If we apply these criteria of what should constitute the basis for the construction of a science to psychology, we find a lack of agreement as to what the subject matter is to be. It is not a question primarily of heterogeneousness or vagueness of data; but a question first of all as to what the data are, and, before that even, how the data are to be looked for. I do not know whether there ever was a stage in astronomy when it may have been held that the planets themselves, and not their orbits, were the things to study, or that

only the tail of a comet was interesting, or whether the chemists were ever divided into schools that divided the materials of study according to their shape, and another according to their colour. But psychology is in this position to-day. There are psychologists, a large body, who appear from their works to be interested only in the perceptual or cognitive aspects of the mind—as, for example, most of the introspectionists.

Differences of method are largely accountable for, or linked up with, differences in subject matter. There are some who are interested only in "expression," *e.g.*, the differing varieties of behaviourist. There is nothing that more strikingly illustrates the vastness of the differences we are discussing than a simple analysis of the proportionate number of pages in various textbooks of psychology, devoted to cognitive and affective (emotional) aspects of mind. (Under affective and cognitive I would include emotions generally.)

There are some who believe in nothing but conscious experience, and some who deny that conscious experience has any value for psychology. Some consider that subconscious mental processes are of pre-eminent importance, like the Freudians, and others, like the Adlerians, refuse to admit that such processes exist, or say that they are so much the same as to make no difference.

Conscious factors only Unconscious factors ignored		Adler.
Conscious factors ignored		Behaviourism, Watsonian type.
Conscious factors plus Unconscious factors	postulated	Freud.
Collective unconscious	ignored	Freud.
Conscious factors plus Unconscious factors plus Collective unconscious	postulated	Jung.

Psychologists are not agreed as to the validity of each other's methods of study, as if physicists were to disagree as to the usefulness of the spectroscope. For example, the questionnaire, which is such a favourite method of the laboratory psychologists, is one that is considered essentially misleading by what might be called the clinical psychologists or psychopathologists (but Fleugel recently claims some support for it in psychopathology).

When neither the data nor the methods for proving them are agreed upon, you cannot expect to find that comprehensive results will be observed in the form of laws obtained by deduction from the data.

Perhaps this is why there is no agreement on the fundamental question: what are the elements into which psychology is reducible? It is felt vaguely that the analogy should be with physics rather than with chemistry, forces rather than elements; but forces that have to be differentiated. Nothing could illustrate better the uncertain scientific status of psychology than the present position of the problem of the instincts, as it is customary to call these hypothetical "forces." As Bernard pointed out in a book on Instinct some years ago, no fewer than 600 instincts have at one time or another been distinguished by psychologists of the various schools. No school, and no psychologist, has ever required all the 600 for his particular system, and some schools, including the most popular, namely, the Freudian, have been content with two (at the time of going to press), although these have not at all times been the same two for the same school. For example, "ego-instincts" and sexual ones in the Freudian system have been replaced by erotic and death instincts.

And yet I am convinced that this problem of instinct, and of instinct strength, is of fundamental importance. A study of the major mental diseases suggests time and again that individual psychological differences (other than intelligence) depend largely on different instinctual patterns of endowment, presumably inherited, and that the initial equipment of each individual differs largely by virtue of the varying strengths of the component instinctual tendencies. Some day it may prove possible to describe an individual in quantitative terms of this kind, just as nowadays it is possible to assess him, with relative success, in quantitative terms of his intellectual endowment.

It is important to notice that the assessment of intelligence by standard tests, which is the great triumph of "pure" psychology in practical life, is not really dependent for its success on its derivation from "pure" psychology at all. It is independent in its utility and truthfulness of whether there is a general intelligence or whether there are specific factors; it is independent of introspective methods. It depends on (*a*) the simple experimental rule that a sample may be taken of the environment and applied to the

individual with the likelihood that if the sample is well enough selected, the response will serve as an indication of other responses in the future; and (*b*) on a knowledge of statistical method. Indeed, (*a*) is also a statistical consideration.

IMPOSSIBILITY OF PREDICTION

Since there is no agreement on " Laws " or on elements, prediction is hardly to be expected in psychology. Let us put it in another way: the fact that prediction is not one of psychology's triumphs suggests that none of the laws that may have been formulated deserves general acceptance. But no one could deny that meteorology, which is notoriously feeble in prediction, employs the methods of science in a way generally agreed upon. We have to remember therefore that if prediction fails in psychology it may not be because psychologists look at psychology unscientifically, but because the factors are so numerous, as in meteorology, that it is impossible to have knowledge of them all simultaneously.

Therefore, even if there existed an agreed body of knowledge and of verifiable facts, psychology might fall short of scientific standards, because all the facts necessary for prediction were still not simultaneously available.

EXPERIMENTAL VERIFICATION

This is to a limited extent possible, and has to an increasing extent been used, especially in the field of animal psychology—or should it be called animal behaviour? It can be held, for example, that the Gestalt school have produced experimental verification of this theory of perception at least, and so far no alternative explanation of the results of their experiments is available. In psychopathology verification is naturally sought in the field of treatment; the results of psychotherapy might be supposed to offer a critical comment on the validity of the psychological theories of the therapist. But do they? The following are the results from four different clinics, employing considerably different techniques, based on varied psychological theories :—

	Method	*No. of cases*	*% well or improved*
Clinic A.	Suggestion, indirect ..	221	60
Clinic B (Berlin).	Psychoanalysis	268	66
Clinic C.	Psychotherapy; persuasion and analytical psychology	200 (approx.)	76
Clinic D.	Psychotherapy; persuasion and analytical psychology	193	69

The techniques range from the simplest to the most complicated, from suggestion to Freudian analysis. It might be held that the results tended to show some slight superiority of one method over another, but in fact all that they do show is that whatever method is used, it is followed by very similar results. So that either (*a*) there is something common to all methods which is curative, or (*b*) two-thirds or three-fourths of psychological diseases get better of themselves. The results of psychotherapy cannot, in either case, be used as experimental proof of the validity of psychological theories.

SUGGESTION AS A PERVASIVE INTERFERING FACTOR

In this connection I believe that McDougall is right when he says that the fashionable schools of psychopathology have signally failed to give attention to the effects of suggestion. If there is a common factor accounting for the result I have quoted, it is this factor of suggestion, of the personal influence of the therapist on the patient. Yet suggestion and that most dramatic instance of the effect of suggestion, namely hypnosis, remains neglected.

It requires far more attention than it has received, expecially as to the part suggestion may play in producing the very data which psychotherapists claim to find in their patients. When people claim that the Œdipus complex occurs in many patients, they mean only that they find it in many patients. It is very easy to find, and it may prove that it is easy to produce, what we are looking for. The experimental production of dreams is already possible, and offers a field for experiment. Can the type of dream that would generally be held to confirm some of the more fundamental theories of, *e.g.*, the psychoanalytic school, be similarly produced?

I have known a psychotherapist who used to find anal-erotic tendencies in the histories and the dreams of nearly all his patients. The incidence seemed much higher than the rest of us were accustomed to, and he did not appear to validate his findings in any convincing way or by better therapeutic results.

The most obvious examples of suggestion inextricably mixed with the data of observation are found in the work of the child analysts of Melanie Klein's school. It is impossible to discover from her recent book what is observed, and what is suggested, and her conclusions are inextricably mixed with her premises.

But there is another reason why the results of treatment cannot be accepted as necessarily sound verification or otherwise of psychological theories.

Some illnesses illustrate perfectly the views of a certain school as to the contents of some minds, as, for example, the conscious appearance of an Œdipus complex in certain schizophrenics, but the psychological content is not necessarily relevant to the cause of the disease. It may only be revealed, or released in the Hickling Jackson sense, by it. Results for this reason also cannot be taken as experimental verification of psychological theories of the ætiology of certain illnesses.

OTHER CRITERIA

What other criteria can we apply to psychology that will give it the pride of place as the science of psychology? Will *internal consistency* do? Freud's psychopathology deserves notice in this connection. It has been described as the most dialectically unassailable of the systems of psychopathology (A. Lewis). But is dialectical consistency the mark of science?

No one would contend that it was the principal and essential mark. Copernicus's system was internally consistent, but it was ultimately discarded. So no doubt have many systems of philosophy been internally consistent only to be confronted with others of equal unassailability. Dialectical success might be its own undoing. It reminds me of Winston Churchill's "boneless wonder." In whatever way the system is twisted it always comes up smiling. There have been definite stages in the history of Freud's theory in which the fundamental basis has been essentially changed, yet the superstructure has continued to hold together. The sexual trauma was at first found the essential part, the point of departure for everything. Then sexual trauma became only a phantasy and not something that really happened. Now it need not have existed even in thought. Ego and libido were originally differentiated. The ego and libido became attached to one another and so libido was not now opposed to ego. Then the aggressive or sadistic instincts which were for a time part of the sexual instincts became detached from them and in opposition to them. The super-ego which had never been heard of before became completely indispensable, and was never absent from the analyst's view.

While the psychoanalytic doctrine is the most dialectically complete of all psychologies, the others are very imperfectly thought out. The historic alterations in psychoanalytic theory may fairly be defended as advances with increased knowledge. The interesting thing is the completeness with which each earlier stage appears to satisfy until the master-mind produces a new interpretation. Shall we use as a criterion of a science the subsumption of the largest number of facts under one hypothesis?—*Entia non sunt multiplicanda praeter necessitatem*—or in the smallest number of hypotheses? This would make the psychology of Adler supreme. It has really only one hypothesis, into which everything is made to fit. Hence its popular appeal. But simplicity although a logical desideratum is not a datum of science.

Again what are the facts of observation? What shall we say when, for example, one psychologist finds evidence for a castration complex in most of his patients and another never? What is the position when one school denies that introspective data are valid and asserts that only objective data (responses) can be admitted? Or when another, the Gestalt psychology, asserts that the dissection of the data of introspection has been along wrong lines, and has led to the invention of mythical entities?

If we could agree about the data we might test the validity of a psychological hypothesis by its fitness to the data. Jung has done this for us in a study of a dream which he interpreted according to Freudian psychology, and then according to his own. Both methods seem to fit the dream equally well, and lead to very different conclusions.

Or let us apply Adlerian principles to a manic depressive psychosis, and contrast the resulting interpretation with the theories of Abrahams as to the basis of this condition.

Shall we say that the one is a "deeper" explanation than the other, or only a different one? And can they both be true, or are they both merely descriptions with no possibility of confirmation? This matter of depth or refinement of explanatory hypotheses does not, however, seem contrary to the canons of science. For example, in atomic physics for a time it was satisfactory to explain the phenomena in terms of planetary orbits; the atom was pictured as a little solar system. Now, I understand, the phenomena can be expressed in entirely mathematical terms, and the visual pattern has been outmoded. But what is different in psychology is not that there are explanations at different levels, but that the different level explanations are held to be mutually incompatible, and not as in physics to represent successive stages of understanding.

CLINICAL CRITERIA OF VERIFICATION

There are criteria other than logical ones available to the psychologist, however. Not infrequently in psychological treatment an explanation is felt to fit the facts of interpretation with unusual clearness and, this is the important point, a sense of peculiar conviction, and with subsequent relief of symptoms. As C. P. Blacker puts it in one of

his papers, the explanation seems to the patient a "cliché." But I have seen the feeling of conviction pass off and the symptoms return as before.

There is, however, a domain in which objective criteria for psychological events do exist. There are people in whom emotional events are accompanied by external signs and symptoms of the most obvious kind, *e.g.*, asthmatic attacks. These can be used as touchstones of the appropriateness of some hypothesis advanced to the patient to account for some attitude or thought that he has not hitherto been able to understand. If new light is thrown on an emotional topic, an asthmatic attack may result.

There are then in psychopathology some objective criteria by which the fitness of a hypothesis in a particular case, in turn derived from some general psychopathological theory, may be judged. But in this connection it is always necessary to eliminate the influence of mere suggestion from the experiment.

Mr. C. E. M. Joad, in a recent article entitled "Psychology in Retreat," said, "It is on this view (that there can be no science of mind in the sense in which there is a science of matter), no accident that, when psychology does succeed in obtaining knowledge which is both certain and agreed, it should be knowledge of the workings not of the mind but of the body."

But here in the psychopathology of asthma is a manifestation of the workings of the body produced by a stimulus of a purely psychological order, the stimulus being introduced in accordance with psychological observation and psychological theory. So that it looks as if a truly psychological experiment were, after all, possible in psychology, even although there are so many differences of viewpoint and opinion. And this view is supported by extending working of the body to working of the body as a whole, *i.e.*, to the behaviour of the individual. If an alteration in this can be brought about by the application of psychological stimuli in the light of psychological theories, then there is ground for believing that the theory in question has been derived from correct observation and valid induction. And this, in fact, does happen. For example, a person who has behaved homosexually hitherto, after a course of psychological treatment behaves heterosexually, other lines of treatment having previously failed. This is another example in which I have seen bodily events altered by stimuli of a psychological order.

It looks as if in some spheres of human activity correct observations of a psychological order have been made, "laws" erected on them, and experimental verification achieved.

The failure so far in fact is not with psychology as a possible science, but with psychologists as scientists. It is very odd how actually the results of a method have been accepted as the only data and how a selected portion of the subject-matter has been regarded as the whole of the subject matter. Psychologists must be the most conceited of men. They seem to be prone to a delusion of grandeur; their own small domain is always the Promised Land. They are too vain to recognise that the real difficulty lies principally in the complexity of the phenomena and the limitation of the human intellect in understanding them.

There is still another reason connected with psychologists themselves. The psychological fallacy in the traditional introspective forms of psychology is well known, but psychopathology offers a particularly educative variant of it. Probably each of the most popular systems of psychopathology represents more or less the protagonist's own mental characteristics. I should surmise that this was particularly true of the Adlerian psychopathology. Of both Jung and Adler it may be said that their notorious quarrel with Freud is due to the same thing that has inspired their special systems—their own aspirations towards omnipotence. They do not have the same genius as their former master, but they have sufficient ability and attractiveness to collect people round them and to found a cult. While Adler's psychology might be explained as a projection of himself, Jung's can only be explained in all its more extensive development, *i.e.*, that not necessitated in the first place by the need to assert his difference with Freud, by his own reaction to the cult that he found flourishing round him, his personality having been such as to produce this cultistic effect.

The need to be different, to be unique and the necessity for preserving one's distance on this account seems to be the only explanation of the mysticism and the incomprehensibility of the later Jungian developments. The personal impression he makes is in curious contrast with his later teachings; and the contrast suggests all the more that the latter have to some extent been forced upon him.

As for Freud, what are we to say of him? and how much does his psychological system represent his own personal make-up? If we examine what it emphasises and what it leaves out we may obtain some clues. The outstanding point in Freud's system of psychology have been :—

The preponderating influence of

The consepts of :—

1. Early sex trauma and of

2. The Œdipus complex;
3. The wish;
4. Of conflict;
5. Repression;
6. The unconscious;
7. And unconscious conscious or super-ego;
8. Anal erotic interests and the character based on them, and
9. Narcissism.

We might surmise something from this list, but only with proper regard to the cultural milieu.

CONCLUSION

It seems to me that so long as psychology devotes itself to human behaviour, not only of parts of the body but of the individual as a whole, *i.e.*, his observable reactions; and if we include speech in the behaviour which we can observe, and if we allow also for the constant intervention in the experimental situation of the factors of personal influence or relationship, of which suggestion is one of the manifestations; and if we remember to relegate many of the systems which have been called psychologies to sub-departments in the study of the individual as a whole; and if we remember to discard our own complexes, and to discount their operation in our attitude to the theories of others, we may, after all, have something that is nearly as satisfactory a science of psychology as the electron theory is as a science of the universe. Only let us not suppose that we can say anything about a reality behind the mind, any more than the physicist, so long as he remains a physicist, believes that in physics he has found the essense of the universe.

There will still be the same difficulty in psychology as there is about the Universe—whence and whither are the questions in both. In the case of the universe, What wound it up, if it is running down? In the case of the individual, Whence the drive, the urge, the purposiveness? But that is the problem of life itself; and psychology alone cannot be expected to answer that.

Animal Heat

A Paper read to the Physiological Society by J. A. L. Leeming, Esq.

MR. CHAIRMAN and GENTLEMEN,—Heat production is one of the most characteristic signs of life; it may be seen even in such low forms of life as germinating seedlings. In human beings the heat of the body is maintained at a fairly constant level somewhere between 97° F. and 99° F., and it is with the mechanism of this control and its evolution through the animal kingdom that this paper attempts to deal.

To begin with, we must have a clear conception of the essential differences between warm- and cold-blooded animals. The latter's activity depends on the external temperature, which virtually controls the temperature of the animal. At first sight this might appear to cause a vicious circle, since when in response to a rise in the external temperature general activity is increased, this causes more heat to be liberated internally, which will in turn raise the body temperature, and thus cause a further increase in the metabolic rate of the body. This, however, is compensated for by the moist, slimy skin of these animals; the latent heat of evaporation is apparently enough to cope with normal conditions.

Krogh, working on cold-blooded animals in a water-vapour saturated atmosphere, showed that for every 1° C. rise in the body temperature, the metabolic rate rose 10 per cent. This increase tended to fall off slightly, however, as the temperature rose, but was marked right up to the lethal temperature.

In cold conditions, warm-blooded animals have an enormous advantage over cold-blooded ones, since under such conditions their metabolic rate is increased, encouraging simultaneously an increase in muscular activity. However, like most things in life, this has to be paid for, and if we imagine a lizard living at normal temperature and possessing a surface area of about $1\frac{3}{4}$ square metres, its total energy requirements are only 25 per cent. of those of a man under the same conditions. That the general metabolic rate of a warm-blooded animal is largely dependent on the ratio of the surface area to the body weight is well shown by the fact that while an elephant has a pulse of 25, that of the mouse is 700!

Speaking generally, the response to a low external temperature is a speeding up of the metabolic rate and activity in certain parts of the body. Under the reverse conditions, heat is lost and the chief physical methods of this heat loss are convection, radiation and evaporation.

In tracing the evolution of the heat control mechanism we are most fortunately assisted by the existence in Australia of two biological freaks: the duckbill platybus and the ant-eater. The latter is the lower form of life and has no sweat

glands, but it can raise its heat production by a modified form of shivering. Since its capacity for heat loss is limited, it adopts safety-first tactics and runs a temperature about 10 degrees below that of an average warm-blooded animal. Its thermogenic control is, however, so rudimentary that its temperature tends to vary considerably with the external conditions, and it hardly falls either into the warm- or cold-blooded class. The duckbill platybus is definitely superior, not only does it possess sweat glands that function, but on the strength of this it preserves a fairly constant temperature within reasonable limits of variation of external conditions. When the latter go to extremes, the duckbill platybus returns to the habits of its ancestors and no longer behaves as a warm-blooded animal.

The late Professor Pembrey made an interesting discovery in this line while working on the chicken embryo. He demonstrated three heat-control stages in the life of the embryo. The earliest or cold-blooded stage was when a drop in the external temperature caused a drop in the CO_2 output, there was an intermediate stage when neither a fall nor a rise in the CO_2 output was caused by this, and, finally, a third warm-blooded stage when a drop in the external temperature did cause an increase in the CO_2 output.

He found that up to the first day of its life the chicken embryo was definitely not warm-blooded, but on bursting into the world a 20-degree drop in temperature caused a 100 per cent. increase in CO_2 output. Other workers have found that birds born naked have not much heat-regulating capacity for some days; half-day old guinea-pigs have, however, been shown to be definitely warm-blooded. Hibernation in the lower animals is merely a partial reversion to their cold-blooded ancestors, who had no choice in the matter, due to their physical disability. It is even found that seven-month old babies have only a very rudimentary heat control mechanism, and for this reason great care has to be taken to prevent them from getting cold.

In spite of the comparatively great efficiency of the heat-control mechanism in man, there are limits with which the system cannot cope.

Recovery has been recorded in man after the temperature has fallen as low as 24° C. This was accompanied by a drop in blood pressure and paralysis of the higher nerve centres. Pyrexia, on the other hand, causes quickened pulse and respiration, accompanied by headache and muscular weakness. Halliburton and Mott have shown that a prolonged temperature of 108° F. causes coagulation of the globulin cells in the brain.

A very important factor when living under tropical conditions is the relative humidity of the air. Since the main source of heat loss in the body is due to the latent heat of evaporation of the sweat, any factor affecting the rate of evaporation will be of vital importance. Dr. Marsh, who did experimental work on heat-stroke in Persia for the Anglo-Persian Oil Company, showed that an albino rabbit went into heat-stroke at 116° F., while 107° F. was sufficient to cause this in a black one. On repeating the experiment in a saturated atmosphere it was found that 90° F. as a rule was sufficient to cause heat-stroke. He went on to investigate the various fatal temperatures for animals, and found them to be as follows:—Frog, 104°; guinea-pig, 110°; rabbit, 116°; man, 130°. Man also has the advantage that for a very short time he can stand a few degrees over this lethal temperature before collapsing.

Dr. Marsh then did another experiment with 28 rabbits—14 black and 14 white. He exposed seven of each variety to a temperature of about 116°, and then repeated it with the remainder after soaking their fur in water. In the first case, two survived, both albinos, while in the second there was 100 per cent. survival. This illustrates the extreme importance of the latent heat of evaporation in rapid heat loss.

There is not space here to go far into the clinical aspect of heat-stroke, but it is a condition common in Persia and other warm and damp climates. In spite of profuse sweating, the air is already nearly saturated and so little evaporation can take place; thus the main method of heat loss vanishes. Added to this, the atmosphere is probably still, so that no loss by convection can take place. The result is that the temperature goes up with a run and, unless treated, death soon occurs.

It is found that in these circumstances the blood urea and lactic acid reach very high levels. The condition is best treated by external application of ice, in particular to the carotid region. Although recovery is rapid, there are said to be nervous after-effects, and it is claimed that this is due to damage to the Nissl granules and nerve-cell nuclei. Early workers suggested that this was due to the ultra-violet rays in the spectrum. Marsh's rabbit experiments, in combination with the fact proved by Aldo Castellani that melanin is impenetrable to ultra-violet rays, effectively disproved this. Marsh also claimed that hyperpyrexia is quite independent of the salt concentration in the body, since this same condition is often present in animals that cannot sweat and so cannot lose their salts.

Heat-stroke and sunstroke in the lay mind are always closely connected. In actual fact the best workers on this subject differentiate sharply

between them. Marsh and Aldo Castellani claim that sunstroke is due to ultra-violet rays, and claim that the rarity of this condition among pigmented races is in support of this. Willcoxon declared the cause to be the rays beyond the infra-red end of the spectrum. Against this, however, is Sir Leonard Hill's experiment when he managed to kill rabbits by long exposure to intense light only. He himself suggested that this was due to the infra-red rays.

In these animals killed by light only, incidentally on autopsy patches of pneumonia were found in the lung, and the stomach was very distended.

The conditions ideal for heat stroke may be classified :—

1. A high wet-bulb thermometer reading.
2. A stagnant atmosphere.
3. Muscular work.
4. Lack of a good vasomotor system.
5. Any condition leading to non-function of the sweat glands or congenital absence of these.

The heat loss in the body has been divided as follows : 5 per cent. goes in warming the food eaten and the air inspired ; the evaporation of water and the carbon-dioxide coming out of solution of the blood is responsible for another 15 per cent. ; while the remaining 80 per cent. is due to convection, radiation and sweat evaporation in varying proportions according to external conditions. Quoting a few figures, it has been found that a man sitting quietly in a room at 15° C. in a 50 per cent. saturated atmosphere loses 44 per cent. by radiation, 31 per cent. by convection and 20 per cent. by evaporation. For those who fear that strenuous work may leave them dehydrated, under such conditions about 1 pint of fluid is lost per hour, and so after long periods of exercise at least 1 pint per hour of exercise should be taken.

The military authorities in India actually published an order some years ago that troops on the march in the hot season should be allowed 3 gallons of liquid refreshment per day. It has also been claimed that an Indian coolie, working hard, can sweat 10 per cent. of his body weight, or twice his own blood volume a day without any ill-effects.

In taking this fluid care must be taken to avoid "stokers' cramp," a condition in which there is extreme abdominal pain due to a drop in the concentration of the salts of the body. For this reason saline is the best drink after severe exercise ; however, some more palatable drink with sufficient salts present may be better appreciated.

The general symptoms on exposure to heat are :—

1. A rise in the respiratory ventilation causing a rise in the blood *p*H and alkaluria.
2. An increased pulse rate.
4. Sweating and cutaneous dilatation.
4. A fall in arterial pressure.

To measure heat loss an instrument called the katathermometer has been designed, with two large bulbs and a narrow graduated intervening tube, with graduations in tenths of a degree between 95° and 100°. The time taken by the thermometer to cool through this range is observed, and this, when divided by a constant K of the instrument, gives the rate of cooling in millicalories per square centimetre. A glove made from a variety of materials may be placed over the bulb, and in this way the warmth-retaining powers of materials can be compared.

The extreme importance of sweating was well shown by Loewy, who collected any rare cases of congenital absence of sweat glands he could find and, in two of these, he quotes their average loss of water per day by evaporation. The figures are 217 c.c. and 460 c.c. Since 1 grain of water evaporating absorbs .58 calories, in these cases, unless artificial methods are used, only a very sedentary existence can be tolerated. His own treatment, which has become general, was to make the patient wear special damped shirts ; only in this way was heat-stroke avoided on the slightest exertion.

Haldane was able to show that sweat glands are liable to fatigue if the salt concentration drops much, activity being resumed the moment this returns to normal. He also found that the sodium chloride in the sweat rose in concentration until it was greater than that of the organic material. Up to 20 grams of sodium chloride may be lost in a day's sweating.

In heat production, the most important agent is the muscular system, since this forms over 50 per cent. of the body weight ; certain of the endocrine glands are, however, even more efficient for their weight. Under normal conditions a muscle is only 25 per cent. efficient ; the remaining 75 per cent. of energy is set free as heat.

The phenomenon of shivering is too well known to be discussed here. Briefly, it is fundamentally an involuntary action produced by the activity of the thermogenic centre in the brain.

About the production of heat and the raising of the metabolic rate by shivering, there can be no argument, but the glandular activity is more disputed. In 1890, Rubner and Loewy, wearing nothing but Douglas bags with air-pipes connected with sampling tubes, sat down quite motionless in cold baths at 12° C. for several hours. They stated that unless they shivered there was no increase in gaseous metabolism.

Voigt opposed this at the time, but appears to have been over-ruled. Sir Leonard Hill, however, upset this result in 1914 by showing that naked patients lying on beds on the top of the London Hospital, with the breeze playing over them, showed a considerable increase over their indoor metabolic rate without shivering. Martin confirmed this with a fat and a thin patient under similar conditions; in the former he showed a 9 per cent. increase and in the latter 17 per cent.

Gessler and Laves, experimenting on themselves, claim to have found that this effect is lost on taking alcohol, probably due to the stimulating effect of the alcohol, which produced its own rise in the metabolic rate. Gessler, working on his own gaseous metabolism day by day under constant conditions, found that his metabolic curve was 10 per cent. higher in January than in June. De Almedo states that his metabolism is 20 per cent. lower in Rio than in New York. Martin, sailing to Australia, found that his metabolism gradually fell as he neared the Equator, and in the Red Sea was actually 12 per cent. below the level in England. These changes, not produced by extra muscular activity, must be concerned with the glands, particularly the suprarenal and the thyreoid, and the pituitary through its adrenotropic and thyreotropic hormones.

The latest work in cold-bath experiments has been done by Hunt at St. Bartholomew's Hospital. In investigating Raynaud's phenomenon, he sat in a bath at 12° C. with an electric fan blowing ice-cold water over him for one and a half hours. In this time his temperature fell 5° F. At 94.5° F. he found that there was numbness of the extremities, combined with shivering and blueness.

Many physiologists hold that the thyreoid takes no part in heat control, quoting the fact that a thyreoidectomised spinal dog shows no impairment of heat regulation. In this case probably the suprarenal is acting on its own.

We now come to one of the most important aspects of this subject, the nervous connections and heat-regulating centre.

Although there is considerable disagreement as to the path of these connections, there seems to be no doubt that the afferent fibres enter the posterior roots, cross and run up in the lateral spino-thalamic tracts to the posterior part of the thalamus. The efferents from the centre go out to the sweat glands, and the erector muscles of the hair, closely following the sympathetic vasomotor fibres. Freund and Jansen went so far as to say that section of the motor nerves would not impair heat production, the stimuli then being carried by the sympathetic. This was attacked on the grounds of insufficient anatomical evidence.

Pflüger was one of the earliest to try to locate the heat centre. By sections of cord, he could only establish it as being above the level of the sixth cervical segment.

Sherrington followed this up with some experiments on dogs; he placed several of these in a room at 2° C. with a control; the latter curled up into a ball, erected his hair and shivered. The others only showed these signs in those parts of the body supplied by segments of the cord above the section. The higher the section was, the greater the discrepancy in heat production, until finally he showed a "mid-brain animal" to be poikilothermic in its behaviour.

Pembrey and Kinnaway, on sectioning an animal in the mid-thoracic region, found a 30 per cent. increase in the oxygen consumption which was caused by the unaffected muscles doing overwork to make up for the area of uncontrolled heat loss. They also found that lumbar section had no effect, proving that the nerves concerned must all be given off above this region.

Further work by Goltz and Isinghinot suggested that the centre lay in the base and sides of the third ventricle. Barbour, by introducing a small double tube to the base of the lateral ventricle in the corpus striatum area, was able to show that variations of 5° in the water circulating through these tubes affected the body heat control; the fact that so large a variation was required robbed his work of much of its significance, but Haldschmidt adapted the experiment by introducing a tube on each side and was able to produce the same effect with variations of 1°—2°.

The early theory that the corpus striatum was the centre was disproved by the fact that its removal caused no apparent after-effects of any description. As a result of this, Professor Woollard has suggested that the corpus striatum is quite functionless. Although so far no function has been found for it, this is extremely unlikely.

The most recent theory is that the centre lies in the hypothalamic region, probably being below and connected with the subthalamic nucleus. Meyer in 1913 defined a thermolytic and thermogenic centre, the two being closely interconnected and acting reciprocally. Martin later divided the latter into a thermogenic proper and a thermopheidic, the former being connected to the muscles and glands, while the latter on stimulating caused constriction of the cutaneous capillaries and erection of the skin-hairs.

Finally, we may touch briefly on a point of topical interest, the effect of sun-bathing on the tissues and the effect of various types of dress. The heat

waves, on striking a surface, are either absorbed or reflected. Martin devised a sensitive thermopile by means of which he was able to estimate the amount of heat reflected and, by exposing it directly to the sun and comparing the two results, the actual percentage absorbed. This has been of great value in designing tropical kit, and some of his results are interesting. The heat absorbed by different clothes is: a white shirt, 29 per cent.; khaki, 57 per cent.; dress clothes, 95 per cent.; black velvet, 97 per cent.

He also showed that brunettes absorb more heat than blondes, the figures being 65 per cent. and 57 per cent. The unfortunate negro absorbs 85 per cent.

To sum up the whole subject: the essential parts of the heat production process are the muscular system and the glands already mentioned. For these, both the somatic and sympathetic nerves must be intact. For all practical purposes, the main factor in heat loss, provided external conditions are suitable, is sweating, and for this the parasympathetic system is essential. Thus for the complete control of body heat all three nervous systems must be present and functioning.

Infantilism

A Clinical Lecture delivered at Guy's Hospital on 18th January, 1937, by Richard W. B. Ellis, M.D., M.R.C.P.

GENTLEMEN,—Infantilism may be defined as a more or less uniform delay in growth and development. The patient is not only small, but retains the relative proportions and characteristics of an earlier age-period. Perhaps I may remind you that normal growth from infancy to adult life does not simply consist in getting larger, and that the newborn baby does not in any sense resemble an adult drawn to small scale. If you compare the two, you will see that whereas the baby's head represents approximately a quarter of his total height (and has a correspondingly great circumference), the adult head is little more than an eighth; the long legs of the adult, on the other hand, represent half his total height, whereas the baby's arms and legs are relatively short and his umbilicus lies well below the midpoint. Nor is the change from infantile to adult proportions a steady one. After a period of rapid growth in height and weight during the first year, the baby undergoes a process of filling out, which gives him the rounded, brevilinear proportions of earliest childhood. From five to seven he grows rapidly in height, and is usually brought to hospital because his mother has noticed his alarming slenderness. This is followed by a second period of filling out, and again by a sudden access of rapid growth immediately preceding, and during, puberty. Finally, the gazelle-like adolescent becomes transformed into the only too familiar stocky, sheep-like adult.

It follows that measurement of height and weight alone provides a quite inadequate index of development; one must know the relative proportions of limbs, head, trunk, etcetera, and whether the normal phases of growth have been passed. In addition, X-ray evidence may be obtained of delay in the appearance of the centres of ossification and fusion of the epiphyses, and the age of eruption of the teeth should be compared with the normal. Lastly, we have delay in the appearance of puberty and secondary sexual characters (body hair, and breast-development in the female and breaking of the voice in the male) as the most striking evidence of infantilism. These I have left to last, since delayed sexual development is frequently looked on as the *only* essential feature of infantilism, whereas I hope I have shown that the condition may be manifest long before the normal age of puberty. Thus a boy of ten whose height, weight, proportions and ossification are those of a boy of five can be said to show five years' infantilism. Strictly speaking, a "perfect" case of infantilism should show the same stage of mental development as the normal child who is his physical counterpart. More commonly, however, it is found that the child with physical infantilism is intellectually the equal of his contemporaries in age, and it is only when the normal age of puberty has been passed that emotional differences become manifest. These boys or girls fail to develop any of the male aggressiveness or more subtle feminine characteristics which we associate with adolescence; their interests remain childish, and Apert quotes the example of an intelligent "infantile" of 18 who spent his days in hospital making paper boats to sail in his bed-bottle.

If these criteria are kept in mind, it will usually be possible to distinguish between infantilism and dwarfism. Dwarfism implies small stature only, so that whilst it is true that every case of complete infantilism is a dwarf, it is not true that every dwarf is necessarily infantile. A dwarf may be a perfect miniature adult, or his dwarfism may be due to defective development of the long bones

only (achondroplasia), whilst his sexual and general development is normal. Or again his small size may be the direct result of deformities due to Potts' disease, rickets, or osteogenesis imperfecta.

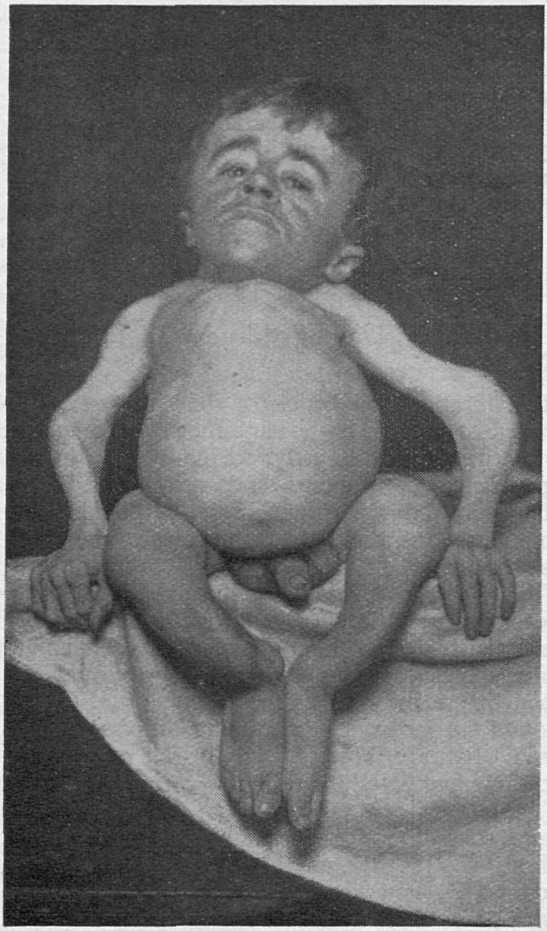

Fig. 1

Dwafism without infantilism, due to osteogenesis imperfecta with multiple fractures. Patient aged 18 years. Note adult facies and genitalia, and hirsutes of legs. (The late Mr. Tyrrell-Gray's case).

I now come to the causes of infantilism, and would emphasise at once that there is no single cause, but many, and that infantilism should be regarded not as a disease but as a symptom. It is possible that in the last analysis some derangement of the endocrine system, possibly of the anterior pituitary, may be demonstrable in every case, but it is certainly true that infantilism may arise from a variety of disturbances originating in other organs. Whilst there is still much that remains obscure, the whole subject has been greatly clarified by the writings of a Guy's man, Mr. Hastings Gilford, whose original description of Progeria, a rare condition in which features of infantilism and premature senility co-exist, focussed interest in this country on the whole group of disorders of growth and development.

Although one cannot uphold the classification too rigidly, three main types of infantilism may be recognised: (1) Racial and familial (essential) infantilism; (2) Infantilism due to primary dysfunction of the endocrine system; and (3) Infantilism due to disease of other organs. These three groups (particularly the first two) may undoubtedly overlap to some extent, whilst in the present state of our knowledge it is uncertain into which group such disorders as glycogen Disease and Gargoylism should be placed.

RACIAL INFANTILISM

Whilst it would clearly be impossible for any race which remained completely infantile to survive, there are certain races and tribes which show well-marked infantile features. This is exemplified by the very sparse body and facial hair of some African tribesmen, by the brevilinear proportions of others, and by the small stature of the pygmies.

ESSENTIAL INFANTILISM
(*Ateleiosis*)

This term has been applied to those cases of infantilism without apparent cause in which heredity plays a part. Many of the most famous dwarfs have come of families in which several members have been affected, whilst others, who have become sexually mature, have married and become the parents of either dwarfed or normal children. (The famous "General Tom Thumb" of last century married a lady of approximately his own size, and is said to have begotten an infant of normal proportions.) Gilford distinguishes a sexual and an asexual form of ateleiosis, but points out that even those individuals who attain sexual maturity and propagate, retain the large head, short limbs and other characters of infantilism; he also quotes the case of a man showing sexual infantilism who became the father of a son who was an "asexual infantile," suggesting that the two types differ in degree rather than in kind.

INFANTILISM DUE TO PRIMARY ENDOCRINE DYSFUNCTION

1. *Thyroid.*—Perhaps the most perfect example of infantilism is to be seen in the untreated cretin, who retains both the relative proportions, size and intelligence of the infant, although the other characteristics of cretinism (skin, facies, slowing-down of bodily functions, etc.) would prevent an

older cretin from being confused with a normal baby at the same stage of development. Fig. 2 shows a cretin, aged six years, with a normal child of the same age, and illustrates not only the small size of the cretin, but the relatively large head, short limbs and squat trunk as compared with the normal child.

Fig. 2
Cretin, aged 6 years, with normal control. (Dr. Maitland-Jones's case.)

2. *Pituitary.*—Since two of the manifold functions of the anterior lobe of the pituitary are concerned with growth and sexual development, it follows that atrophy of this lobe from the pressure of tumours either within or immediately above the sella turcica, or from other causes, will result in a state of infantilism. The most familiar type is that described by Fröhlich, though it should be emphasised that very few of the large, fat boys with their genitalia hidden by suprapubic fat are really examples of his syndrome. The typical "Fröhlich" is of small stature, with delicate hands and feet, fine hair and smooth skin; there is obesity having a girdle distribution around the hips and chest. The genitalia remain undeveloped when the normal age of puberty is passed, and secondary sexual characteristics fail to appear. In some cases there is confirmatory evidence of a tumour in the region of the optic chiasm (*e.g.*, bitemporal hemianopia) or pressure on one or other of the centres situated in the hypothalamic region. Polyuria or glycosuria are not uncommon.

A syndrome which has commonly been attributed to hypopituitarism, but of which the pathology is much less certain, is that described by Lorain. Here the patient retains the slender appearance and graceful proportions of later childhood or early adolescence, and is often almost indistinguishable across the footlights from a normal child of 13 or 14. (Actually, Lorain's original description referred to patients affected with tuberculosis in later childhood, who were examples of infantilo-chetivism.)

3. *Pancreatic.*—The term "pancreatic infantilism" was originally applied, owing to a mistaken conception of the pathology of the disease, to

cœliac disease. Infantilism does occasionally occur, however, in association with diabetes in childhood. Untreated cases seldom lived sufficiently long to show infantilism, but in a few treated cases it is found that growth and development cease, and that there is great hepatic enlargement. It is possible that these will prove to be suffering from glycogen retention, as in glycogen disease.

4. *Adrenal.*—It is doubtful if a true adrenal form of infantilism exists. Addison's disease is excessively rare in childhood, but it is possible that progeria (premature senility associated with statural and sexual infantilism) is due to atrophy of the suprarenals.

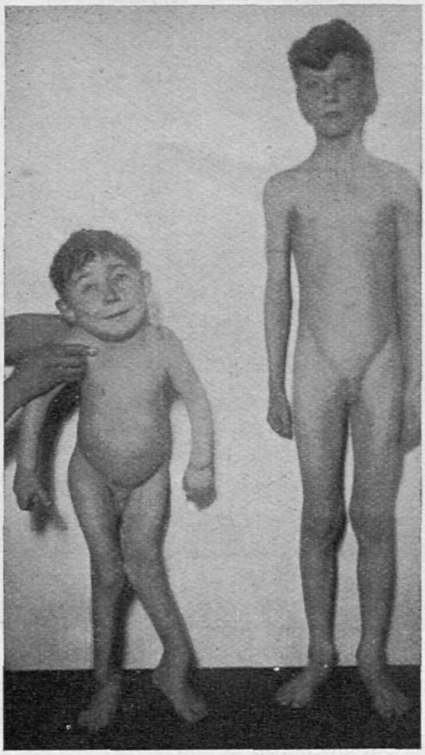

Fig. 3

Renal Infantilism. Patient, aged 9 years and 10 months, with normal control. Deformities due to renal rickets. (*The Lancet*, Jan. 19th, 1935.)

5. *Gonadal.*—Destruction of the gonads before puberty results in a partial infantilism, since sexual development, including the appearance of secondary sexual characters, is inhibited, whereas statural growth continues more slowly but for a longer period than the normal. The result is that the eunuch in later life is typically above the normal height.

INFANTILISM DUE TO NON-ENDOCRINE DISEASE

For a disease to produce infantilism, it must (1) occur before development is complete, (2) affect one or more vital organs, and (3) operate over a sufficiently long period without proving fatal. General diseases such as congenital syphilis, tuberculosis and parasitic infection may operate in this way, though the term "chetivism" or "infantilo-chetivism" is sometimes applied to such conditions affecting the general health to distinguish them from those well-defined types in which a single organ is primarily abnormal.

1. *Renal Infantilism.*—Chronic interstitial nephritis in childhood differs from the disease as seen in adult life in that the course tends to be longer, and that the blood-pressure may not be conspicuously raised until the terminal stages have been reached. It has been suggested that the kidneys are in these cases congenitally abnormal, and again that the renal sclerosis may arise from a chronic low-grade infection of the urinary tract.

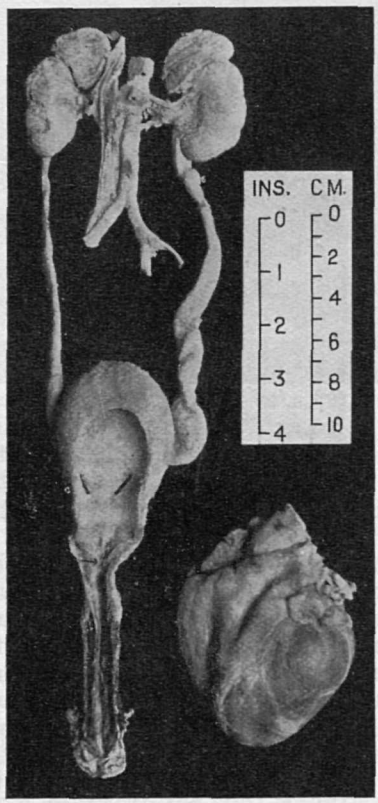

Fig. 4

Atrophic kidneys (with adrenals attached), dilated ureters, hypertrophied bladder, and arrow indicating site of posterior urethral valve. From the same case. (*The Lancet*, Jan. 19th, 1935.)

Fig. 5

Arm of child, aged 5 years, with cœliac disease, and normal control. Note small, poorly calcified bones, delayed ossification of carpal bones, and rachitic changes at wrist.

It is certainly the case that at post-mortem the ureters are frequently found to be dilated. Growth often seems to have stopped abruptly at a certain age, whilst late rachitic deformities are common and add to the degree of dwarfing.

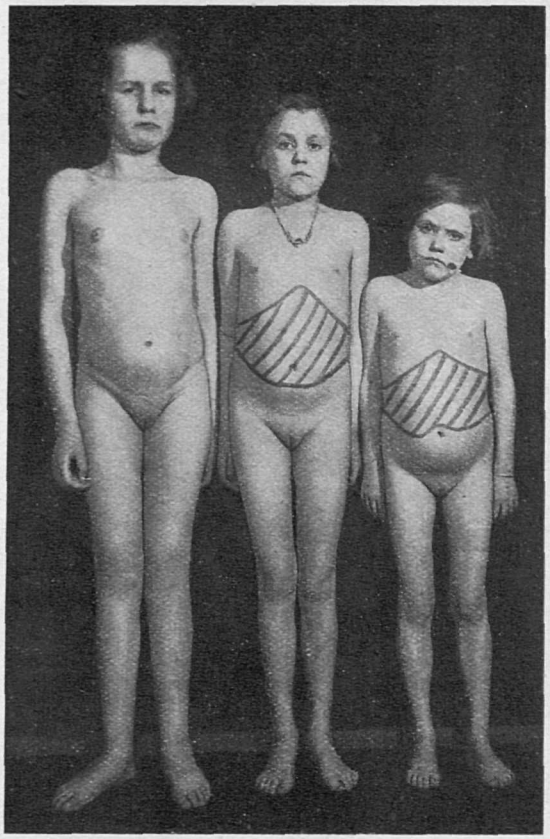

Fig. 6

Glycogen Disease. Sisters, aged 14 and 12 years, with normal control aged 12 years. Hepatomegaly and infantilism. (*Proc. Roy. Soc. Med.*, 1934.)

2. *Cœliac Infantilism.*—This unexplained inability to digest fats is almost invariably accompanied by well-marked infantilism. The chronicity of the disease and the ill-health and deprivation it engenders, accentuate the stunting of growth as time goes on. Unless the patient has had early and thorough treatment, the stunting is likely to be permanent, although recovery from the disease commonly occurs in later childhood. The skeleton is severely affected, the bones being small and poorly calcified, and ossification delayed ; evidence of late rickets is usually present (Fig. 3).

3. *Cardiac Infantilism.*—Both congenital heart disease and rheumatic carditis acquired during childhood will sometimes, but by no means invariably, cause delay in development and stunting of growth. Thus one means by which the body can attempt to compensate for an inefficient heart is by remaining small.

4. *Hepatic Infantilism* is rare, since the regenerative powers of the liver are such that hepatic disease in childhood is generally either fatal or unassociated with permanent disturbance of function. A number of examples of familial cirrhosis associated with infantilism in two or more siblings have, however, been described.

5. *Primary Amentia.*—In any mental hospital you will see a number of patients in which idiocy is associated with a varying degree of defective physical development. The most extreme example that I have seen was a 14-year-old boy who was the size and mentality of a baby of 14 months.

6. *Other Types.*—Lastly I would mention two rare conditions, Glycogen (Von Gierke's) Disease

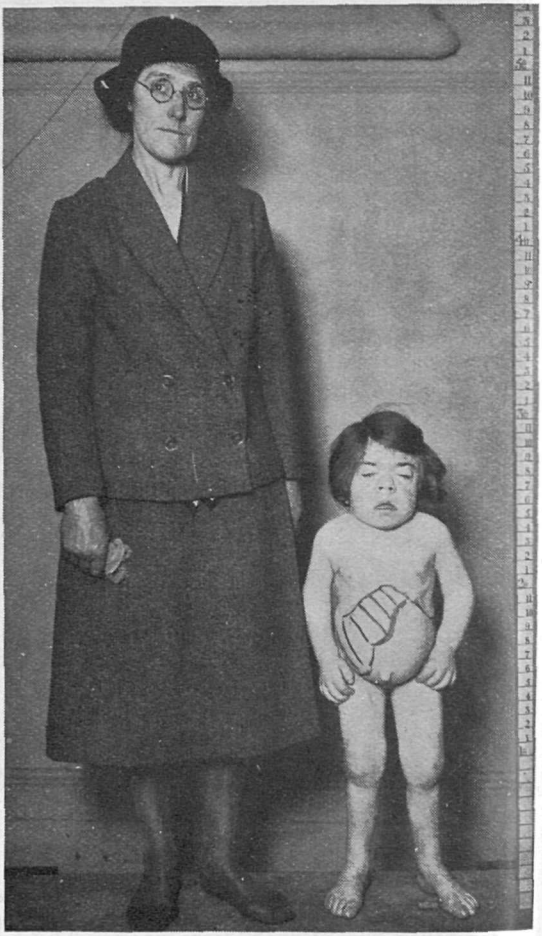

Fig. 7

Gargoylism. Patient aged 18 years.

and Gargoylism. The former is characterised by an abnormal stability of glycogen, which is stored in enormous amount in the liver and elsewhere, and can only be mobilised with difficulty. This results in the fasting blood-sugar being constantly at hypoglycæmic levels, and by the appearance of acetone bodies in the urine. Possibly due to the tissues being starved of available glcuose, possibly due to dysfunction of the pituitary being responsible for the whole condition, it is found that affected patients show infantilism which is peculiarly uniform (affecting statural development, ossification, dentition, etc., equally).

Gargoylism I will illustrate from the accompanying photograph. The patient is aged 18 and is standing by her mother, who is a small woman. You will note the extreme dwarfism, large liver and spleen, deformities, and facies. In addition, these patients show congenital corneal opacities and are mentally defective. (Fig. 7.)

Sport

Rugby

Guy's v. Old Merchant Taylors

THE Old Boys entertained Guy's at Teddington on Saturday, January 2nd, and won comfortably by 2 placed goals and 2 tries (16 points) to a placed goal (5 points).

The Hospital were well below full strength, but they started so well that one had visions of a Guy's revival. After doing most of the attacking in the first quarter of an hour, they paid the penalty for faulty tackling when Hamilton crossed for a try in the corner, and Huskisson kicked a great goal from the touch-line.

Nicholson was in good form and obtained the ball from most of the set scrums, in spite of the fact that the Hospital forwards were out-shoved by a heavier pack.

L. E. Milton, a wing three-quarter, was tried at scrum-half and performed his task creditably, but Allen failed to provide the link with the back division. On several occasions he was caught in possession, and his proneness to kick ahead to a full-back with D. M. Parry's experience proved fatal.

Whenever Guy's had the ball, their back division never looked like scoring, as their movements were so mechanical that the Old Boys had no difficulty in anticipating them. The Old Boys gave an object lesson in first-class tackling, and seldom allowed the Hospital backs to go very far.

Dick and Birks were so closely marked by Huskisson and Turnbull that the wings scarcely had a chance. On the other hand, the Old Boys, especially in the second half, indulged in a number of fine movements, which might have been more profitable had they not been so over-anxious to score.

After their first success the home side set up a series of attacks, but Guy's held out until Turnbull cross-kicked and Camp was up to cross for an unconverted try.

With a lead of eight points the Old Boys started the second half with a determined forward rush, which was checked near the Hospital's 25. Having gained a footing in such a favourable position, the Old Boys carried out a series of attacks, and it looked as though they would score any moment. However, to everybody's astonishment Birks cleverly intercepted a pass only ten yards from the line, dashed through the centre and, when faced by the full-back (who was standing some yards inside the Hospital half), passed to Morey, who had cut inside. The latter made full use of his speed by running from midfield with Turnbull in hot pursuit, to register a try behind the posts, and Kark added the goal points.

The Old Boys retaliated immediately, and, following a kick-ahead, Sanders was caught out of position and Gibbon dashed up to score an unconverted try.

On one occasion Guy's nearly scored again, when Crabbe forced his way through on the right, but, although Forbes was in close support, they were not fast enough, and Parry managed to clear.

In the closing stages Guy's had to defend desperately, but they could not prevent Fadden crossing near the posts, following a fine individual effort by Wyndham-Smith, and Camp made no mistake with the goal kick.

Team.—W. B. Sanders; J. L. G. Hartley, P. H. Birks, R. C. S. Dick (Capt.); L. G. Morey, R. D. Allen, L. E. Milton; M. R. Kark, E. S. Nicholson, H. H. Crabb, J. R. D. Williams, A. Forbes, C. G. Sharp, D. P. Finnegan, F. Walt.

Guy's v. Waterloo

ON Thursday, January 7th, Guy's journeyed to Blundellsands to play the first match of their tour, and were defeated by a placed goal and 2 tries (11 points) to nil.

Unfortunately, Waterloo are rarely able to field a full side in a mid-week match, and on this occasion they had to call in the services of three members of Liverpool University, including H. K. Lucas, their hooker.

Guy's did not make an impressive appearance,

and, even allowing for the fact that Forbes was injured midway through the first half and that they had to battle with seven forwards for three parts of the game, they did not show the skill calculated to bring distinction in their games against the other Liverpool teams.

The forwards played hard and well, and, with Nicholson hooking, they got the ball better than their opponents, so long as their pack was at full strength.

Owing to erratic handling, the Hospital backs made little use of the opportunities that came their way, and Allen again overdid the kicking.

In Webster, Waterloo had a clever fly-half, and had the centres passed with the same accuracy, Laithwaite and Calder on the wings might have scored more often.

Laithwaite made the opening for the first try, in which Webster also took part, and Clint, who backed up splendidly, crossed for an unconverted try.

Waterloo led by three points at the interval, and it was not until late in the second half that they were able to add to their score. Again Laithwaite was responsible when he took a bad pass rather wonderfully, and with little room in which to move he beat the Hospital defence by his pace and swerve.

Near the end Collinson found a gap in the centre, kicked ahead, and touched down for a try, which Webster converted.

Team.—W. B. Sanders; L. G. Morey, R. C. S. Dick (Capt.), P. H. Birks, L. E. Milton; R. D. Allen, S. W. Lewis; H. H. Crabb, E. S. Nicholson, M. R. Kark, A. Forbes, J. R. D. Williams, E. C. Sharp, F. Walt, R. O. Yerbury.

Guy's v. Birkenhead Park

GUY'S played their second match of the tour when they met Birkenhead Park on Saturday, January 9th, and were decisively beaten by 5 goals and 4 tries (37 points) to a dropped goal and a try (7 points).

C. S. Darke and P. Fletcher, who were unable to play against Waterloo, were included in the Hospital team in place of Sharp and Forbes, and J. P. Crawford returned to the right wing in place of Milton.

The forwards were well matched, and at no time were Guy's beaten in the set scrummaging. The Park's superiority lay mainly in the backs, who gave a delightful display of running and passing. Hancock, Downes (the Cambridge full-back) and Holden were brilliant, and after an indifferent start Bibby and Steel combined perfectly.

Holden scored the first try for the Park, touching down near the corner, and as Morey levelled the scores with an excellent try for Guy's there were signs of an even game. However, the home side launched a series of attacks, and before the interval Buckley, Hancock and Holden scored tries and Bibby kicked two goals.

Birkenhead opened the second half with a storming try. Buckley started a loose rush in midfield and dribbled single-handed through the Hospital defence, and scored near the posts, Bibby converting.

Brilliant passing between the Park three-quarters, ended in Hancock and Downes scoring tries, to which Bibby added the goal points.

Then Nicholson led the Hospital forwards in some hard scrummaging, and from behind a loose maul in front of the posts Allen dropped a goal after he had been tackled by Steel.

From this point Birkenhead bombarded the Hospital line, and Slater finished the scoring with an unconverted try in the corner.

Team.—W. B. Sanders; L. G. Morey, R. C. S. Dick (Capt.), P. H. Birks, J. P. Crawford; R. D. Allen, J. W. Lewis; M. R. Kark, E. S. Nicholson, D. P. Finnegan, J. R. D. Williams, F. Walt, R. O. Yerbury, C. S. Darke, P. Fletcher.

Guy's v. Liverpool University

AFTER their heavy defeat at the hands of Birkenhead Park, Guy's returned to their headquarters at Southport, and on Monday, January 11th, completed their tour with a match against Liverpool University, which they lost by 2 placed goals and 2 tries (16 points) to a placed goal and a try (8 points).

The University were at full strength, whereas Guy's fielded an unfamiliar back division with Sharp restored to the full-back position, Allen and Hartley in the centre, and Crawford (a left wing) occupying the position at fly-half.

Judging by his display in this game Crawford came out of the ordeal well, and, although it is late to experiment, Guy's might do well to persevere with him in this position after the Cup-ties.

Once again the forwards came out of the match with full marks, and so satisfied was Nicholson with the pack that throughout the second half he took scrums in preference to the line-out.

There is no doubt that the Hospital possess a really sound pack, and if the backs can be moulded into a similar combination, then Guy's need have no fear for the future.

The Hospital forwards not only dominated the set scrums, but were supreme in the loose. Had their outsides taken their chances instead of kicking so much, the University backs would not have had the opportunities which they turned to good account.

Following passing and repassing between Halewood and Clarke, the latter scored early in the game, and Guest followed soon after with a try on the opposite wing.

For a time the University appeared to rest on their laurels, and, profiting by this lapse, Crawford followed up one of his many kicks ahead, gathered and crossed for a try, which Kark converted.

Two splendid movements early in the second half ended in Pennell and Clarke scoring tries, both of which Hindley converted, and near the end Hartley finished off a loose rush by scoring an unconverted try for Guy's.

Team.—E. C. Sharp; L. G. Morey, R. D. Allen, J. L. G. Hartley, L. E. Milton; J. P. Crawford, J. W. Lewis; M. R. Kark, E. S. Nicholson, M. J. Drew, J. R. D. Williams, D. P. Finnegan, F. Walt, P. Fletcher, R. O. Yerbury.

Association

Guy's v. Brentford Mental Hospital

GUY'S drew with Brentwood Mental Hospital at Brentwood on Wednesday, January 13th, each side scoring 6 goals.

The ground in this game was muddy, and the ball soon became very heavy. Brentwood made several attacks at the beginning of the game, but were unable to score. Then play went to the other end, and from a centre by Jones, Harvey headed in to give Guy's the lead. Ten minutes later, however, Brentwood equalised and, following continued pressure, soon scored again to take the lead. Play was even for some time, but just before half-time Jones equalised for Guy's.

After half-time Guy's pressed hard, and after a free kick against Brentwood, Pearson scored a third goal for Guy's. The Mental Hospital then took the offensive and soon equalised. They kept up the pressure and scored again a few minutes later. They went further ahead after a free kick against Guy's which was not cleared.

Guy's played harder after this and reduced their deficit through Goldman, who caught the Mental Hospital backs lying wide apart. Soon after this the same player equalised after progress on the right wing. Nevertheless, Brentwood soon took the lead again following a period of pressure.

Guy's then proceeded to attack strongly, and equalised through Jones five minutes from the end.

Team.—C. Halamandres; D. G. Sharp, A. N. Johnson; F. K. Johnson, G. M. Pearson, H. A. Lee; J. Jones, N. L. McNeil, J. R. C. Goldman, G. G. Rees, E. Harvey.

Guy's v. National Bank of India

GUY'S beat the National Bank of India by 4 goals to 1 at Blackheath on Saturday, January 23rd.

The ground was almost under water, and, as a consequence, it was very difficult to remain upright. The game started in sensational fashion, Guy's scoring through Dorr straight from the kick-off.

Guy's kept up the pressure and, about ten minutes later, Harvey increased the Hospital's lead. After this, Guy's slackened and play was more even, although still taking place chiefly in the Bank's half of the field. Ten minutes before the interval Dorr scored again, and put the Hospital three goals ahead.

A few minutes later the Bank reduced Guy's lead after a passing movement between most of their forwards.

After half-time Guy's continued to attack, but for some time were unable to score. However, after fifteen minutes, Dorr scored a fourth goal for the Hospital.

The Bank began to have more of the game, but were unable to penetrate the Hospital defence. Several times towards the end of the game Guy's were unfortunate in not scoring, several shots just going outside the posts.

Team.—K. A. Stanyon-Jacques; D. A. Priestley, B. M. Heap; J. A. E. Watts, G. M. Pearson, H. A. Lee; C. Halamandres, R. W. Harvey, G. W. Dorr, E. W. Wright, G. L. Sprigings.

Hospital Information, etc.

Notices

GUY'S HOSPITAL MEDICAL SCHOOL FINAL F.R.C.S. COURSE

February—May, 1937

A Course of Instruction for the Final Examination for the Fellowship of the Royal College of Surgeons of England will begin on Monday, February 22nd. Guy's men wishing to take the course should give in their names at the Medical Office at once.

T. B. JOHNSTON, *Dean.*

GUY'S HOSPITAL DENTAL SOCIETY

The Thirty-eighth Annual Dinner of the Guy's Hospital Dental Society will be held on Saturday, March 6th, at 7 for 7.30 p.m., at Grosvenor House, Park Lane, W.1.

A Clinical Meeting, consisting of a Morning and Afternoon Session, will be held in the Dental Department on the same day, to which all past and present students are invited. Demonstrations will be given by members of the Staff and cases

of clinical interest will be shown. The Morning Session will begin at 10.30 a.m. and the Afternoon Session at 2.30 p.m.

F. BOCQUET BULL,
Sub-Dean of the Dental School.
PAUL BORGHYS,
Hon. Secretary of the Dental Society.

DIPLOMA IN ANÆSTHETICS

A Course of Instruction in preparation for the Examination for the Diploma in Anæsthetics of the Conjoint Examining Board in England will begin on April 26th, 1937. The Course will cover a period of three weeks and will include lectures in Physiology, Anatomy, Pharmacology, Clinical Investigations and Anæsthetics. The fee for the course will be £15 15*s.* 0*d.* Further information may be obtained from the Dean of the Medical School.

GUY'S HOSPITAL DENTAL SCHOOL POST-GRADUATE COURSES

Porcelain Inlays and Jacket Crowns. By K. Hooper, M.R.C.S., L.R.C.S., L.D.S. An intensive course of six sessions to be held in the afternoons of the week beginning Monday, February 15th, at 2 p.m. Entrance fee, £8 8*s.*

Partial Denture Designing. By Professor H. R. B. Fenn, L.D.S., D.D.S. An intensive course of six sessions to be held in the mornings of the week beginning Monday, February 22nd, at 9.30 a.m. Entrance fee, £8 8*s.*

Inlays, Crowns and Bridges. By W. E. Herbert, L.R.C.P., M.R.C.S., L.D.S. An intensive course of six sessions to be held in the mornings of the week beginning Monday, March 1st, at 9.30 a.m. Entrance fee, £8 8*s.*

Opportunities will be provided for practical work by the applicants during that portion of the day not occupied by demonstrations.

Applications to attend the above courses should be made to the Sub-Dean, Dental School, Guy's Hospital, London Bridge, S.E.1, and must be received not later than 14 days before the beginning of each course.

Pass List

UNIVERSITY OF OXFORD.

The following Degrees were conferred on 12th December, 1936.

Bachelor of Medicine, Master of Arts.
T. H. Shire.

UNIVERSITY OF OXFORD.

December, 1936.

M.B., B.Ch.

Anatomy and Physiology.
E. Smith.

Materia Medica.
C. D. Cormac — E. B. G. Reeve
O. I. Green

Pathology.
W. E. Young.

Forensic Medicine and Public Health.
G. O. Jelly — T. H. Shire
T. E. Ooi — R. H. S. Thompson

Medicine, Surgery and Obstetrics.
W. F. Dunham — T. H. Shire
G. O. Jelly

Papers by Guy's Men

Major H. J. Bensted. Typhoid fever—An examination of the virulence of strains of bacterium typhosum derived from blood cultures of one hundred consecutive cases. *Jour. R.A.M.C.*, 1937, lxviii, 1.

W. E. Herbert and A. R. F. Thompson. Research on gold casting. *Proc. Roy. Soc. Med.*, 1937, xxx, 245 (Sect. Odontol.).

R. Brooke. The effect of removal of the patella for simple transverse fractures on the function of the knee-joint. *Ibid.*, 203 (Sect. Orthop.).

A. T. Fripp. Incomplete fracture of femur. *Ibid.*, 201 (Sect. Orthop.).

G. B. Dowling. Dermatomyositis. *St. Thomas's Hosp. Rep.*, 1936, i, N.S. 150.

W. A. Mill. The operative treatment of Ménière's syndrome. *Ibid.*, 192.

Changes of Address

K. L. Scott, L.D.S., "Dalmuir," Darkes Lane, Potters Bar, Middlesex.

J. W. Schabort, 22, Wellesley Road, W.4. *Chiswick* 2928 (temporary).

F. Bocquet Bull, 69, Wimpole Street, W.1. *Welbeck* 2316.

E. J. Crisp, M.B., B.Ch., 75, Grosvenor Street, W.1. *Mayfair* 3702.

Births

VERMOOTEN.—On December 22nd, 1936, to Billie (née Palsson), wife of Ian R. Vermooten, of Pretoria, South Africa—a daughter.

SCHABORT.—On November 28th, 1936, to Bertha (née Marthinusen), wife of J. W. Schabort, M.D.—a son.

VINE.—On January 8th, 1937, at Oatacamund, S. India, to Betty (née Brookes), wife of Capt. Roland S. Vine, R.A.M.C.—a daughter.

Death

PASMORE.—On January 21st, 1937, at 17, Sketty Road, Swansea, Edna, beloved wife of Lindley Pasmore, L.D.S. (Eng.).

EDS. { A.G.W.H. / H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

THE last line of the Residents' Play reminded us that it is several weeks since we mentioned the Appeal, but we hope that this stirring finale may have stimulated many to fumble for their fountain pens and cheque books, before the tears of joy engendered by the happy ending have hardened into to-morrow's carefulness.

We feel that it is better not to enter into details after our ambiguous statement of a month or so ago, but we understand that the progress made in the last few weeks is more than satisfactory, and we intend soon to reproduce our graph, showing the relative increase month by month. This we hope will still resemble the temperature chart of a patient in the early stages of typhoid, though in this case a prolonged bout of hyperpyrexia is eagerly anticipated, and a rigor or two here and there would not be misplaced.

It is in this connection that we would draw attention to one or two important events which are being organised on behalf of the Appeal, and, even though as yet they may seem far distant, and the draughts in the College make any mention of summer sound ridiculous, it is not too early to bear them in mind, and we feel that their attraction will be enormous. For who could resist the sight of the Governors playing cricket? Yet we are told that during September a grand cricket match will be played at Honor Oak Park, in which a team composed of Governors and students, numbering some fifteen or more and captained by Lord Ebbisham, will be opposed by a team of professional cricketers from various county sides. Few details are, of course, available at present, but we are delighted to learn that Jack Hobbs, who must have run thousands of runs almost within earshot of the Hospital, and whose name will ever be remembered by those who watch cricket in the shadow of a not far distant gasometer, has promised to turn out for the professionals.

This memorable match should provide the southern suburbs with its own Gentlemen and Players, and it is in the constitution of the Gentlemen, or, if we may borrow Mr. G. O. Allen's term, the "Unpaid Players," that we are especially interested. There is, we feel sure, enough talent connected with the Hospital to produce a team worthy of the occasion, though we cannot boast of anybody on the Staff who, in build or beard, could compare with the unforgettable Dr. Grace, whose very presence would make professional bowlers sag at the knees.

His medicine may have been crude (it is always said that he once sewed up his brother's cut lip with wire off the top of a champagne bottle), but he would have relished a match such as this, and his value to the Appeal could hardly be overestimated, for in the nineties, when money was plentiful, we read of the following notice being displayed outside a ground in Gloucester: "Admission threepence; if Dr. Grace plays, admission sixpence."

Such was the attraction of this giant, who was, perhaps, the best-known doctor of his day. But, who knows? There may be Graces among us now, and we look forward to this match with the keenest pleasure in the hopes that it will cause a sharp rise in the receipts of the Appeal.

September should be a most profitable month so far as we are concerned, for, besides the cricket match, the Appeal is to receive the proceeds from the first performance of one of Mr. Korda's most stupendous, most soul-stirring, and also somewhat expensive productions, entitled "Knight Without Armour." This film will probably be shown at the Leicester Square Theatre, and as Miss Marlene

Dietrich is in the cast, it is, we feel, assured of success, so let us hope for an audience as brilliant, and if we may say so, as expensive as the cast. Our gratitude towards those who have so generously allowed us to benefit in this way could not be exaggerated.

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IT is always stimulating to watch others work, and, perching ourselves on some steps behind the Medical School last week, we watched with interest the excavations taking place there.

Several of those melancholy buildings which separated the Medical School from the Borough High Street have now been demolished, and the site is being rapidly cleared for the erection of the new Pathology Block, which will replace that architectural curiosity in which the Department is at present housed. We use the word "rapidly," of course, in a somewhat restricted sense, for we noticed among those engaged in this task habits which reminded us of their colleagues who built Nuffield House. There was that same keen anticipation of the dinner-hour whistle, that same definite limit of speed, that same interest in affairs outside, and, above all, a marked tendency to while away the time with a little mild backchat directed towards some of the more persistent spectators. However, in a short while a great deal of work seems to have been done, and much of the ground has already been cleared, in spite of the fact that some of it has necessitated the continued use of compressed air road drills.

These delicately modulated instruments can be heard to great advantage in the Medical School, and we understand that several lectures in the Physiological Theatre have had to be abandoned, but Dr. Mutch, we are told, refused to surrender to these onslaughts, and is to be congratulated on being the only one able to hear himself above the din.

But road drills are not the only weapons on the scene now, and we feel that a little piston slap from the drainage pump and the eccentric chugging of the concrete mixer may prove irksome to students of histology and biology during the next few weeks, but even at the cost of a little less attention to the entrails of the rabbit, or a long since lifeless fish, we are delighted to see that a start has been made on this much-needed addition to the School. One fact alone fills us with alarm, and that is the appearance of powerful electric lamps above these enormous earthworks. For the sake of the patients in Nuffield House, the audience at the Residents' Play and our more immediate neighbours, we hope that this does not mean that the hideous din will be carried on into the night.

WHEN Victoria Ward was first opened in its new, better and brighter form, several people expressed the opinion that the number of beds was now too great, and that difficulty would be found in filling them, but, though the depression on the District continues, Victoria, we are told, is busier than ever, and some eighty babies have already been born there this year.

Thus it appears that there is no falling off in the supply, and the difficulty now appears to be the lack of cots in which to house the little dears. Moses, we know, was found in an ark of bulrushes, but we wonder whether Pharaoh's daughter would have sensed a slight infringement of her copyright if she had seen an infant nestling snugly in a potato basket, as we did in Victoria the other week. However, we are assured that these picturesque cradles are only temporary, and that a fresh consignment of cots is expected daily. Whether these will be adorned by those dust-attracting canopies, so beloved of her late Majesty, remains to be seen.

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ELSEWHERE in this number we publish a letter from Viscount Cecil drawing attention to the recently introduced International Peace Campaign, and, unlike the famous Peace Ballot of a year or so ago, we feel that this undertaking might produce some useful and practical result if it were afforded adequate support. All the four objectives of the International Peace Campaign, as outlined by Viscount Cecil, are worthy of the attention of the whole world, though we confess that at the clause relating to the sanctity of treaties we used the same sardonic smile as we did when Herr Hitler guaranteed the neutrality of Belgium.

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WE would congratulate the Rugby side on their victory over St. George's in the first round of the Inter-Hospitals Competition, and feel sure that such a convincing win should encourage them to further efforts to regain something of their prestige of former years. The victory is the more creditable when it is realised that the captain, Mr. R. C. S. Dick, was not playing. He was, no doubt, saving his energies for Scotland's match against Wales, but it is hoped that he may find time to play in the next round.

▭

THE Colonnade is always cluttered with posters; operations, combined rounds, sales of work, dances in aid of this and concerts in aid of that, and, of course, the daily frolic in the Dead House, all have their allotted advertisement. But we learn that shortly a new poster will appear drawing attention to the fact that this year the Rugby

Club is holding a dance at the Westminster Palace Rooms on Wednesday, March 3rd. We feel sure that, as there are still some long winter evenings to be filled in, many would like to take tickets for this attractive entertainment. These may be obtained from Mr. C. S. Darke at the modest price of eight and sixpence.

WITH the Residents' Play over for another year, perhaps many will wish to forget all about acting, and more expecially the tedium of rehearsals. But if anyone has discovered any latent talent for the stage, or feels lost without a rehearsal to go to, we would remind our readers that there is a course in the art of acting, and almost every subject connected with the stage, at the Everyman Theatre, Hampstead. This consists of lectures and demonstrations on Sunday afternoons, and for the sum of two and a half guineas a thorough training in the art of the theatre may be obtained. Full details can be had on application to the Little Theatre, Citizen House, Bath.

Obituary

WILLIAM LEONARD BRADDON, M.B., B.S.

(With acknowledgments to *The Ex-Services of Malaya Magazine*)

THE dwindling ranks of Ex-Service men have been still further depleted by the loss of one who can ill be spared. The name of William Leonard Braddon, so well known in the Negri Sembilan, will be remembered with honour throughout Malaya and far beyond.

Born in 1861, Dr. Braddon adopted medicine as his career, and adorned the profession of his choice, graduating M.B., B.S., with First Class Honours at the University of London (of which he was a scholar) in 1887, after having gained the Fellowship of the Royal College of Surgeons in 1885. He was Mackenzie Bacon Prizeman, Burdett Prizeman in Hygiene, Gold Medallist in Clinical Medicine at Guy's Hospital and in State Medicine.

In 1889 Dr. Braddon joined the Government Service in Selangor, and it was while State Surgeon that he discovered that beri-beri was due to dietetic and not infective causes. Continuing research work in this subject, he published in 1907 his book, "The Cause and Prevention of Beri-Beri," and finally, in 1912, discovered the cause of the disease—a signal service to medical science.

In 1908 Dr. Braddon retired from the Government Medical Service, and devoted all his great talents and inexhaustible energy to the planting industry. In the Great War, although 56 years of age, he set an example to many a younger man by joining the Forces, and was gazetted Major R.A.M.C. early in 1917, serving in Salonika till the end of the war, when he returned to Malaya to exert untiring efforts to save the rubber industry. He was for some time Chairman of the N.S. Branch E.S.A.M.

Dr. Braddon was active, cheerful and unbeaten to the last, and the void which his passing leaves will be but partially filled by the lasting memorials which his distinguished labours have achieved.

A Tribute

HERBERT WILLIAM DUDGEON, M.D.

WITH the passing of Herbert William Dudgeon at the end of 1935 a great Guy's man left us. His ability was very considerable, and after the usual student appointments he qualified with the Conjoint Diplomas in 1897. Probably he would have been made a house-officer, but the typhoid epidemic at Maidstone in the later part of last century attracted him to that town, where he did most useful work during the outbreak. He thus lost his seniority, but took his M.B., B.S. Degrees at Durham University in 1899. Afterwards he took the M.D. of Durham. Almost immediately after he had taken his M.B. he was appointed to the Department of Lunacy in Egypt, for which appointment, he told me, Dr. Savage telegraphed a laudatory testimonial. He continued in this Department, and eventually became Director of it, and Lecturer on Mental Diseases in the Egyptian University at Cairo.

But it was in his prowess as a Rugby footballer that his chief fame will consist. He played for Guy's, Richmond, and in various English trials, and was selected to play for his country in 1897 and 1898. He was a very fine forward indeed, being heavy, strong and fast, and he had a great knowledge of the finer points of the game. It is the custom now to put figures on the backs of the

players, in order to mark their identity. There was no such necessity to mark Dudgeon, as he was so easily identified by the excellence of his play.

He was a most charming man, and most kind to his juniors, giving them every chance of doing credit to their Hospital and themselves. Sir Cooper Perry, A. J. Cleveland, R. C. Mullins, K. B. Alexander—who, fortunately, are still with us—and H. W. Dudgeon were the writer's heroes in his young days, not so much because they were all men whose different forms of ability he admired and respected, but because he felt that their characters were so worthy of imitation.

A. RALPH THOMPSON.

The Use of Basal Narcotics in Anæsthesia

A Clinical Lecture delivered at Guy's Hospital by Archibald D. Marston, Esq., M.R.C.S., D.A.

GENTLEMEN,—The basal narcotics have been used by anæsthetists for about ten years, and at first were regarded with suspicion and not employed as often as they deserved. In later years they have become popular, not only with surgeons and anæsthetists, but also with the patient. At the present time the anæsthetist is apt to be persuaded to use basal narcotics in every case. This I consider unfair, and it is due largely to the unfortunate and often inaccurate comments on this matter in the daily press. I believe that we are now passing from the time when they were used too often, and in too large doses.

It is possible, after a decade, to assess from clinical experience the indications and contra-indications of basal narcotics and to express a critical opinion of their value and true rôle in anæsthesia.

In my experience there are four advantages in the use of these drugs, the first of which is the more important. This is the abolition of psychic trauma in the induction of anæsthesia.

The chief dread about an operation from the patient's point of view is the taking of the anæsthetic and the ordeal of transport to the theatre. The basal anæsthetics enable the patient to be induced in bed, and taken to the operating theatre quite unaware of his surroundings.

The second advantage is the absence of struggling during induction. It would be wrong to say that all patients become violent during inhalation induction, but quite a percentage of them do.

You may have noticed the difficulty with which quite frail subjects are restrained, and this expenditure of energy, which may be considerable, is the worst preparation for a patient shortly to be subjected to a varying degree of surgical shock. Again, during fright and struggling, the secretion of the suprarenal glands becomes depleted, blood pressure falls, and the patient is fatigued.

The third advantage is the fact that gas and oxygen anæsthesia will suffice in most cases to complete the balance of anæsthesia.

The virtue of gas and oxygen lies in the fact that here we have a means of anæsthesia which entails no alteration in the function of the parenchymatous glands, which is not a tissue poison, does not alter the blood sugar, is not contra-indicated in renal, respiratory, cardiac or acute toxic conditions, and causes no vomiting or respiratory complications. These good results from nitrous oxide plus oxygen are only to be obtained when sufficient oxygen is given to supply the metabolic needs of the body.

Gas and oxygen given alone presents a problem, because it is difficult to secure sufficient anæsthesia and at the same time adequate oxygenation. But if given with a basal anæsthetic, this difficulty is removed, and oxygen may be freely administered.

The fourth advantage is post-operative quiet, the patient remaining in a sleepy state for some hours.

These advantages have created a new era in anæsthesia, which is now robbed of most of its former terrors; and it is a notable fact that patients who have had a basal anæsthetic do not, as a rule, dread a repetition of the experience.

The basal narcotics are not universally applicable, with the exception of paraldehyde they all lower blood pressure, depress the respiratory centre and render the reflexes of the upper respiratory tract less brisk than is usual after other anæsthetics. Thus in wasting diseases, asthenic states, abnormally low blood pressure, and in those undergoing operations where a brisk return of the laryngeal reflexes is to be desired, basal narcotics must be used with caution.

In operations where much blood loss or shock is expected, only part of the usual dose should be administered.

The effects of shock are intensified in the presence of deep basal narcosis, and the normal process of resuscitation seems to be retarded. This is chiefly due to depression of the respiratory centre, and in the absence of adequate ventilation of the lungs, sequelæ such as massive collapse or hypostatic congestion are prone to occur.

Careful nursing is required after basal narcosis, and the patient must be observed and promptly treated for symptoms of respiratory failure. A

degree of cyanosis persisting for any length of time puts a great strain on the right side of the heart and predisposes to pulmonary complications. An efficient airway must always be maintained by natural or artificial means, and a mixture of carbon dioxide 7 per cent. plus oxygen 93 per cent. administered if required. The best hypodermic injections are the analeptic æquous solutions of camphor derivatives such as coramine and cardiazol. These are proprietary drugs, now much in vogue, their exact pharmacology is not known, but clinically they are undoubtedly efficient. In serious cases of respiratory failure they may be used in large doses, as much as from 5 to 7 c.c. at a time. Other injections are Icoral (Bayer) and Alpha-Lobeleine: these, in my experience, have not the same routine efficiency, but in desperate cases provide suitable alternatives.

Combinations of pre- and post-anæsthetic medication with basal narcotics may lead to cumulative drug action.

It is well to remember the hypothesis of Burgi, which states: "Drugs having the same pharmacological action summarise their therapeutic effect when given together, but drugs of different pharmacological actions increase their activity to an extent far greater than the sum of their action, when given separately."

Thus the administration of large doses of pre-anæsthetic drugs is to be deprecated, and post-operative medication should be withheld until the major effects of the basal narcotic have definitely waned.

In my opinion accidents with fatal termination seldom occur from the effects of a basal narcotic, but are due to:—

1. Too great pre- and post-operative medication.
2. The superimposition of sudden, massive or prolonged surgical shock.
3. Lack of good nursing and treatment during the post-operative period.

Basal narcotics are numerous, and may be divided into three groups:—

Group .I—Avertin (tri-brom-ethanol).

Group II.—Paraldehyde.

Group III.—The barbituric derivatives:—

(*a*) Amytal sodium.
(*b*) Nembutal.
(*c*) Sodium soneryl.
(*d*) Evipan.
(*e*) Pernocton, 2 Y.B.—bromallyl-barbiturate.
(*f*) Sodium pentothal.

The basal narcotics are administered in three ways:—

1. By the mouth.
2. By the rectum.
3. Intravenously.

The route by which each drug may be given has a considerable influence upon the choice of narcotic.

With such a wealth of agents to choose from it is a mistake always to use the same drug.

There lies a great temptation which must be resisted, for each case should be considered on its merits, so that the most suitable choice may be made.

In this lecture we shall only have time to consider the first two groups of basal narcotics, and must leave the barbituric group to another day.

GROUP I.

Avertin. — CBr_3CH_2OH — Tri-brom-ethyl-alcohol.

This is a white crystalline substance which, mixed with amylene hydrate, forms the avertin fluid in common use. One cubic centimetre of the fluid contains 1 gram of avertin, and the dose ranges between 0.08 to 0.12 gram per kilogramme of the body weight. The average or "Bayer standard dose" is 0.1 gram per kilogram body weight, except in obstetric practice, where a proportion of .075 gram per kilogram is usually employed.

Reliance upon the weight ratio will not give the best results; it is necessary to examine the patient and only experience will enable you to find the optimum dose. One may, perhaps, make the observation that young people need more than old, fat people require less than thin, and that nervous subjects take more than those of placid temperament.

In wasting diseases where extensive dehydration of tissues has occurred, the weight is a fictitious one, and it is well to give a dose not exceeding .08 c.c. per kilogram of body weight.

In obese people, I find it is seldom necessary to exceed the .01 c.c. dose for 13 stone, *i.e.*, 139 mm. of avertin in 330 c.c. of distilled water.

If it is not possible to weigh an adult patient, most subjects will take the standard dose for 10 stone 4 pounds, that is 110 mm. of avertin in 261 c.c. of distilled water.

In private practice it is my custom to divide the avertin solution into two portions, the first of which contains three-quarters of the dose, and this is given first. If the patient needs the last quarter of the dose this is slowly administered. Quite a number of people sleep with the first portion, in which case the second is not given. In addition, I always prepare a reserve dose made up in the proportion of .01 c.c. of avertin for 1 stone or 6.35 kilos., *i.e.*, $10\frac{1}{2}$ mm. of avertin in $25\frac{1}{2}$ c.c. of distilled water, and this I give, without hesitation, when necessary.

By these means most cases become amenable to the basal narcosis of avertin.

To achieve uniform success with this drug, care must be taken in preparation and administration.

Do not leave these important duties to others if you wish to obtain the best results.

The dispensing of avertin does not take very long, if you know just what to do. It consists in the main of mixing a quantity of distilled water with avertin fluid to form a 2½ per cent. solution.

Avertin fluid does not mix with distilled water, unless the latter is warmed to body heat.

The dispenser has to steer between two errors. If the distilled water is too cool, the avertin fluid will not dissolve, but is precipitated as a crystalline deposit. On the other hand, the distilled water must not be heated beyond 40° C., or it will decompose avertin, with the formation of dibrom-acetaldehyde, even slight traces of which will cause damage to the epithelium of the bowel and much pain and discomfort to the patient.

So important is this that there is an obligatory test for every prepared solution, and this consists of the addition of two drops of a 1 : 1,000 æquous Congo red solution to 5 c.c. of the 2½ per cent. avertin solution.

The resulting colour must remain bright orange red. Improperly made solutions turn the colour dull to blue, and must be discarded.

In practice, I find that it pays to spend a few minutes in accurately heating the distilled water to body heat, now add the avertin, shake briskly together, and the solution is ready to be tested, and then put into a thermos jug for transport to the nursing home.

Haphazard dispensing is the cause of many failures, for there is often a difficulty in making a solution if the distilled water has not been suitably heated, and then if the supernatant liquid is poured off the best part of the dose is left behind.

The actual administration is full of pitfalls. Do not allow relations or friends to stay in the room. Always explain just what is going to be done. I usually say: "Now this is avertin—so called because it averts all the discomforts commonly associated with the induction of anæsthesia; it is a rectal injection, but is quite the opposite to an enema. An enema, as you know, is returned because it is an irritant to the bowel. Now this is quite different; the avertin will soothe the bowel and will speedily be absorbed."

The patient is now requested to turn on to his left side and to draw the knees up towards the chin. Meanwhile the thermos flask is uncorked, and, before using the solution, half a pint of hot distilled water (T.—120° F.) is run through the tube and funnel.

This is important, because if this is omitted heat will be absorbed from the tube and funnel and a cold solution poured into the rectum, than which few things are more uncomfortable. The rectal tube is then lubricated with liquid paraffin or vaseline and is inserted no more than 4½ inches into the rectum.

The avertin solution is then slowly administered, the whole process taking about eight to ten minutes. If the solution is given too quickly uncomfortable sensations will result.

Discourage the patient from talking, tell him that he will very soon experience a feeling of well-being and sleepiness, and that when he does he must not resist this sensation, but should relax his muscles and go to sleep.

Sound and light are the great primitive stimuli of the conscious self, and it is advisable to darken the room and to put pledgets of wool into the external auditory meatus.

The patient goes to sleep without any signs of excitement or distress, and the experience is described as a pleasant one.

Respiration becomes more shallow than normal, the blood pressure falls about 10 to 15 mm. of Hg. and the pulse rate increases.

Unconsciousness will continue from two to four hours, and a sleepy state for some time longer. The patient can usually be roused after one and a half hours and may drink if he likes; he will then sleep on again.

The conjunctival reflex is absent, but the corneal is usually just present. Blomfield has pointed out that if the corneal reflex is absent, the patient is not usually in a stage of surgical anæsthesia; he will move, and his musculature become rigid if stimulated.

The anæsthetic effects of avertin may be increased by pre-medication with such drugs as heroin, morphia, hyoscine hydrobromide and omnopon; caution is needed, as the respiratory centre may become depressed and the margin of safety reduced.

Avertin is excreted by the kidneys after detoxication by combination with glycuronic acid (Endoh).

The precise mode of manufacture of avertin has not been published; it is a "trade secret," but it is known chiefly to consist of the reduction of bromal with yeast.

Avertin is antipyretic, and during recovery shivering may sometimes be observed. It is usually transitory, and the patient should be kept covered with warm blankets. There are few absolute contra-indications to the use of avertin, but it should be employed with caution and only in small doses in patients suffering from low blood

pressure, renal disease, or low basal metabolic rates.

Hepatic disease, until recently, was considered an absolute bar to the use of avertin, but, according to Shipway and other observers, this no longer holds good, and the anæsthetic may be used with discretion.

In cases of overdose, the respiratory centre may be stimulated by inhalation of carbon dioxide 7 per cent. and oxygen 93 per cent., injections of coramine 1 to 5 c.c., icoral 1 to 2 c.c., or alpha-lobeleine 1 c.c. may be given subcutaneously or intravenously, according to the urgency of the symptoms.

Any avertin remaining in the bowel should be evacuated, and a rectal infusion of saline and glucose given.

A 10 per cent. solution of sodium thiosulphate may also be given as an intravenous or rectal injection.

All patients should be under constant observation during recovery in order that the airways may be kept patent, and any signs of respiratory failure dealt with immediately.

GROUP II.

Paraldehyde is a product of the polymerisation of acetaldehyde and has the formula $C_6H_{12}O_3$.

It has a somewhat offensive odour, a specific gravity of 0.998 to 1.000, and is soluble in 1 in 10 of water.

It is easy to dispense and administer, and is perhaps the safest of all the basal narcotics.

The safety rests in the fact that in correct doses it has little, if any, effect upon either respiration or circulation. Thus it is the anæsthetic of choice in cases of very high or very low blood pressure.

The dose usually given is one drachm per stone of body weight.

This dosage has led to unfortunate accidents, and has tended to make paraldehyde unpopular. It is, perhaps, unfortunate that the symbols for a drachm (ʒ i) and an ounce (℥ i) should be sufficiently alike to be confused by the untrained or careless dispenser.

Quite a number of unfortunate accidents have occurred through paraldehyde being given in ounce instead of drachm doses. That is to say eight times the prescribed and normal dose.

In a Southern Counties hospital such a case occurred in the last year, and you may remember that damages were claimed and given to the patient's husband after a legal action in the High Court of Justice. This case establishes a legal precedent, and it behoves us to make a genuine effort to avoid recurrences of these distressing mistakes.

I suggest that when prescribing paraldehyde one should write out a prescription which cannot deceive the most casual or ignorant mind. Let us suppose we are prescribing for a child weighing four stone and a few pounds. Then write as follows :—

Master Blank, aged 7 years.
Weight—4 stone 3 lb.
The Pre-Anæsthetic Rectal Injection.
Paraldehyde ʒ iv, that is four drachms, or 4 teaspoonfuls.
Mix with normal saline to form a 10 per cent. solution.

Be careful to write down the fact that the mixture is to be given rectally, lest it be given by mouth in error.

If paraldehyde solutions are to be mixed in a ward, then insist that the stock bottle has a capacity of no more than twelve drachms, that is ℥ iss.

This simple measure, if universally adopted, would probably save any more accidents.

Mode of Administration.—The paraldehyde solution is heated to body temperature and is slowly run into the bowel, the patient being placed in the semi-prone position to assist in the retention of the fluid.

The injection is given about three-quarters of an hour before the time of operation.

As a rule the patient falls into a light sleep, with but little alteration of pulse and respiration rates.

The paraldehyde is mainly excreted by the lungs, and has an unpleasant odour. This, however, is unnoticed by the patient.

Sometimes a considerable amount of excitement and restless movement is observed, but this is fortunately rare.

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The Attitude of Mind

A Paper read to the Psychological Section of Guy's Hospital Students' Physical Society by J. S. Wilkie, Esq., B.Sc.

MR. CHAIRMAN and GENTLEMEN,—I am to speak of the attitude of mind. I use the word "attitude" because an attitude is something which can be taken up or rejected at choice. There are, of course, inherent deformities and sudden wounds of the mind, just as there are of the body, but with these I am not concerned.

An attitude, if persisted in, soon becomes a habit, and I might, perhaps, have called this paper "The Habit of Mind." I chose the other word to emphasize the element of choice, which becomes less as the attitude becomes a habit.

The habitual mental background which a man chooses to adopt seems to me a matter of very practical importance to his mental health. I was myself once told to cultivate a cheerful attitude or habit of mind. This is very much as if a physician were to tell a patient to cultivate health; that is just what he wants to do, but he wants to know how to do it.

It is no use telling ourselves or others that "all is for the best in this best of all possible worlds." A man has only to read the daily paper to see that is nonsense.

Cheerfulness will certainly not come to a man who knows he is trying to base it on an illusion.

I have ventured in this paper to give some ideas on this problem, which I do not pretend to solve completely. I have chosen to treat it formally under three heads: optimism, pessimism and realism.

DEFINITIONS

For the purpose of clarity I give definitions which, however, are intended only as indications of the way in which I use the words concerned.

1. The Optimist is one who expects more of life than it will give, or one who thinks things are better than they really are. A man is not necessarily an optimist because he is cheerful.

2. The Pessimist is one who expects less of life than it will give, and who consequently gets less out of it. A man may be habitually somewhat sad without being a pessimist.

3. The Realist is he who sees life as it is and expects neither more nor less of it than it will give. The artists who call themselves realists are often, in fact, pessimists, or even mere pornographers.

A man might, I suppose, be an optimist in regard to one thing and a pessimist in regard to another, but I speak of the general attitude of the man.

In treating a subject like this, two difficulties present themselves. One is a tendency to digress indefinitely, the other is what I can only call a "phenomenon of unification." I mean that the more we review such a subject, the more we see its unity, until we find it very difficult to speak of one part without speaking of all the others. Finally, we feel that the whole subject could best be expressed by a single word could we but find it. The practical result is a great difficulty in avoiding repetitions and tedious cross-references; for this I apologise.

THE OPTIMIST

It seems that all men begin life as optimists. This may be because a man naturally desires that "it should be well with him and his," and, having little experience to the contrary, he believes what he desires. Another fact is that, generally speaking, the condition of children is better than that of their parents, for even the most vicious usually restrain their wickedness in the presence of children, so that a person judging by his childish experience is naturally optimistic. Again, it may be that optimism, although mistaken, is actually nearer the truth than is pessimism.

Some may be inclined to ask, "Does it matter if a man should go through life as an optimist?" If we had no relations with the outside world other than those of a spectator, it would not matter practically, but it would still be better to have the truth. But we must act upon other things and suffer them to act on us, and for this it is necessary to have a true picture or idea of them, and this an optimist, as I have defined the word, has not.

If we wish to see the bad effects of optimism we have only to remember the activities of confidence tricksters.

In politics the optimist is the anarchist who thinks that men are at their best without any government, and we see much the same idea in some modern forms of "education." Rousseau would seem to be the most powerful exponent of optimism.

The optimist is a nuisance and a danger, both to himself and to others, but he is usually self-

satisfied and has no wish to lose his optimism. There is little likelihood of his welcoming the suggestion that his state of mind required correction. If we spoke of " curing " him he would think we were joking.

A man should, therefore, preserve himself from optimism, comparing things as they are with the ideas he has of them. This is the very business of anyone who wants to have the truth, which is defined as a conformity between thought and thing.

THE PESSIMIST

From the subjective or purely psychological point of view, the real danger of optimism is that it so often ends in pessimism. This is no mere paradox, and no new idea, for Plato says much the same thing, when he says that the embittered man is the man who has started life with exaggerated expectations.

The pessimist is usually more intelligent than the optimist, but it does not follow that he is any nearer the truth. Very often, as the intelligence develops, a man passes from optimism to pessimism, and we might say that pessimism belongs to a mental age more advanced than that of optimism.

From this it follows that there is a certain danger of maintaining an attitude of pessimism as a superiority device. On the whole, however, pessimists are not happy people, and would welcome a more cheerful estimate of life if they thought themselves justified in making one.

The effect of pessimism is generally to discourage action. We spoke of the political beliefs arising from optimism, and for symmetry we should speak of the politics of pessimism. Though he is unlikely to be much interested in politics, I suppose the pessimist would be an authoritarian of the strictest kind. Hobbes, we may suppose, is the exponent of such a policy, for he thought men naturally so depraved that they could be ruled only by violence.

Psychology is more concerned with the effect of pessimism upon the man himself. This may be slight, while the attitude of mind is no more than an attitude, but if the philosophical pessimism is united to a natural melancholy, the worst effects may follow. If a man's philosophy is cheerful, he may withstand the attacks of melancholy, but if the higher part of his mind is infected with pessimism he is very likely to take his life in some moment of more than usual depression.

It seems then not altogether unpractical to ask ourselves what are the causes of pessimism, and whether it admits of any cure.

We have already said that optimism may be a cause of pessimism, and about this we have already said more than enough.

A man may be really more unfortunate than his fellows, and this might very well make him pessimistic.

We have spoken of the unfortunate union of pessimism with an inherent melancholy, and melancholy will, of course, be itself one of the causes of an unbalanced mental attitude, the depressed emotions preventing the judgment of the more rational part of the mind.

These causes, with the possible exception of optimism, are difficult to remove or avoid, but there are two things which can easily lead to pessimism and which can, fortunately, be avoided. These are: (1) judging of life by books, and (2) a mistaken idea about human motives.

To take the second of these first. If a man expects always to be acting from the highest motives, or only from the highest motives, he is bound to fall into that sort of pessimism called cynicism. The mistake lies in making no distinction between really bad motives and those which are merely not very exalted. Let us take a trivial example. Suppose I receive from a rich maiden aunt a letter telling me that the old lady is to be in town on a certain date. My natural impulse is to invite my aunt to lunch on that day, but as a cynic I should refuse to follow such an impulse because it might be motivated by the desire of influencing my relative to make a will in my favour. In this objection there are at least three errors: (1) The initial motive is by no means certainly selfish; it is very difficult to judge one's own motives, even in so simple a case. (2) Even if my motive is self-interest, that is not really a bad motive, though it is not a very exalted one. It is not as if I were to ask my aunt to lunch so as to poison her wine. (3) Finally, the cynic's objections can be turned on himself, and we may say that his refusal to act in such a case is due, not to a wish to avoid hypocrisy, as he pretends, but to laziness and meanness.

To this sort of examination of conscience there is no end. All we can do is to make certain that both what we intend to do and our motive for doing it are not absolutely bad.

The works of Mr. Bernard Shaw are, I regret to say, full of the quibbles of cynicism.

This brings me to the first avoidable cause of pessimism, the judging of life by books; reading too much in quantity, without a sufficient regard to quality, or without checking the impressions

gained from books against those obtained directly from life.

One reason of the great difference between life and letters is that tragedy is such an excellent subject for art. Some critics, indeed, regard the "happy ending" as the very type of bad art. Yet the happy ending is, in real life, at least as common as the tragedy. For one courting which ends as tragically as that of Romeo and Juliet, how many end as happily as that of the silliest musical comedy? On account of this difference between life and art, Plato considers whether he shall not exclude tragedy from his republic.

An excellent example of this difference occurs in the works of Zola. In one book he introduces his friend Cézanne under the pseudonym of "Claude Lantier." Lantier is represented as being hypersensitive and mysanthropic, a character which well enough fitted Cézanne; but whereas Lantier goes mad and hangs himself, Cézanne lived to become an artist, now the most universally admired of his period. Cézanne certainly suffered from many disabilities, and, during his lifetime, from many harsh attacks from ignorant or prejudiced critics, but the point is that in the novel he is, for the sake of artistic effect, made to succumb to these difficulties and to die a miserable failure, whereas his life was, in fact, an example of true success gained by great perseverance against great odds. Yet Zola is one of the artists who is often called by his admirers "a realist."

THE REALIST

As I have said, the pessimist, although sometimes happy enough in his pessimism, is generally willing to be convinced of his error, but to prove to him that things are not as bad as he imagines is by no means easy.

This brings us to the question of realism. It is one thing to define optimism and pessimism as I have done, but quite another to decide what our state of mind will be after we have become realists. Is reality, when seen without addition or diminution of its unpleasant side, such as to make us cheerful, or is it on the whole a melancholy business?

As this is a central problem of philosophy, I might perhaps retire at this point and leave the question for each to settle as best he can. I will, however, make one or two suggestions which, I hope, may help towards a solution.

Again you must permit me a trivial example, this time not hypothetical.

When I was a student I was interested in parasitic worms. One day I had made a microscopical preparation of one of these creatures. The Professor, who happened to be paying one of his rare visits to the laboratory, looked down my microscope and exclaimed, "By Jove, that's one of the prettiest things I've seen!" Now, I might myself have been considered a prejudiced witness, but the Professor had not made the slide, and had no special interest in parasites.

The fact is that where association and personal experience would tend to make us regard a thing as repulsive, we find that thing, whether the meanest of animals or the most revolting of diseases, becomes delightful to the person who devotes serious study to it, or even, as in this case, to the person who chances to see it stripped of its unpleasant associations.

This is very significant, because, of all men, the scientist is most certainly in contact with the truth —that is, with reality. I say "most certainly" because, within his limited sphere, the scientist possesses truths which even the most ardent sceptic finds it difficult to doubt. It is true I think the philosopher, when he possesses the truth, possesses a view of reality far richer and more significant than that of the scientist, but, unfortunately, it is much more difficult to arrive at certainty in philosophy than in science. So I say the scientist is most certainly in contact with reality, and we see that the scientist finds something good and delightful in the worst of things.

By these considerations we may arrive at an attitude of mind which is at once truthful and cheerful. We see that in arriving at this state of mind we must in a manner put aside sentiment and emotion. Is this legitimate? Nothing is more so, because everyone knows that it is just when we are trying to take the most objective, that is the most realistic, view of things that we must, in fact, attempt to free ourselves most scrupulously from emotion and sentiment.

To sum up. I think that anyone who tries to form some kind of judgment of reality as a whole or, if you like, of things as they are—and such a judgment is by no means a recondite and priggish thing, but is often forced upon us whether we like it or not—anyone, I say, trying to form such a judgment quite properly passes through three phases: at first sight everything seems delightful; on nearer acquaintance life seems intolerable; but if we patiently and laboriously undertake a study of reality either in science or philosophy, or, better still, in both, we find, underlying the very real evil which we see around us and within us, something more permanent, more powerful, more veracious—in a word more real, and this reality is certainly good.

Reviews

Physiological Principles in Treatment. By Sir WALTER LANGDON BROWN, M.A., M.D., F.R.C.P., and R. HILTON, M.A., M.D., F.R.C.P. Published by Messrs. Baillière, Tindall & Cox. Seventh Edition. Pp. 308. *Price* 10*s.* 6*d.*

IT has been said that medical students are no longer taught the art of treatment in hospitals, because that is done so thoroughly by the various manufacturers of proprietary products, whose constant delight it is to litter the breakfast table with solutions to all sorts of therapeutic problems, from enteritis to earache, or from pyorrhœa to piles.

We don't believe that, however, though we admit that these unsolicited advisers leave little to chance, and that perhaps more emphasis might be laid by physicians on the important question of therapeutics, but we always welcome a book on treatment, and in these days of rule-of-thumb therapy and mass-produced medicine, it is most refreshing to be reminded of the basic physiological facts that lie behind our attempts at healing.

In their outline of the physiological basis of treatment, the authors have condensed an enormous amount of information into a comparatively short space, and, what is more important from the point of view of busy practitioners who may regard such literature as a kind of intellectual refreshment, they have succeeded in keeping the book readable the whole way through. Much of the subject matter has been rearranged to fit in with recent discoveries, and, as far as possible, references have been confined to recent and easily accessible works.

The chapter on hormones and the principles of organotherapy seemed to us to be an admirable summary of the present knowledge, which could be read with advantage by anyone who finds difficulty in following the vast, and often conflicting, mass of literature that has arisen in the last few years.

An entirely new chapter has been written on the subject of the anæmias, the section on asthma has been enlarged to include other allergic conditions, whilst ketosis is now described along with diabetes and other disorders of carbohydrate metabolism, but, apart from these alterations, the scope of the book remains much the same, and we feel that this, the seventh, edition should be as popular as its six predecessors.

There are one or two misprints that might be corrected, among which we would mention the statement on page 78, which says that " carcinoma of the stomach often shows a complete achlorhydria with a low total acidity, much of which is due to lactic acid." We feel that this should read, " high total acidity," but then who are we to talk of misprints, and we have no hesitation in recommending this book to practitioner and student alike, and even a consultant or two might have a dip at it with advantage.

Weight-Reduction Diet and Dishes. By E. E. CLAXTON, M.B., B.S., D.T.M., with Recipes by LUCY BURDEKIN. Published by Messrs. Heinemann, Ltd. Pp. 194. *Price* 8*s.* 6*d.*

DIET has always interested us, and, in a hard and unsympathetic world, there seems no reason why we should not enjoy our meals, but, living in the College with a surfeit of Potage St. Cloud, Creme Parmentier, and too-often cooked meat, it is difficult to maintain a balance in diet, and, whilst it has sharpened our taste for good food when we see it, a tape measure is apt to reveal an alarming increase in girth, no doubt due to an excessive consumption of the more palatable carbohydrates.

Thus it is with more than passing interest that we read Dr. Claxton's new book on weight-reduction by dieting, and thought of many people besides Residents to whom we might recommend it without harm. It starts with a not very attractive picture of some raw vegetables lying about a table in a meaningless jumble, which might do credit to any surrealist artist, but the first chapter we found interesting enough with its description of many famous fat men, amongst whom we found our old friend Daniel Lambert, who weighed over fifty-two stone. This mountain of flesh was born at Leicester, and when he died at the early age of thirty-nine it was found necessary to knock down half the house in order to remove his coffin.

After these interesting historical details the author goes on to outline the enormous disadvantages of being fat, and paints such a vivid picture of the discomfort of a fat man in an omnibus that we began to think that he himself might at one time have experienced these inconveniences. But of his own shape he makes no mention, and passes on to the elementary physiology of digestion and adsorption of food, offering here and there a sinister warning to those who are overweight.

The book is interesting, if not always authoritative in its facts, and at least there is plenty of sound common sense on the subject of eating. We only wish we could see some of the suggestions put into practice.

The recipes seem attractive, but then food can always look good on paper, and we have found mutton dressed as lamb too often to pass any comment on these dishes until we have seen them.

Correspondence

The International Peace Campaign

To the Editor of the GAZETTE

SIR,—The International Peace Campaign is an effort to arouse the peoples of the civilised world in defence of organised peace. That is its only object. It has come into existence for the sole purpose of arresting the drift towards war, of which so many well-qualified observers continue to warn us. It is not a new peace society in the sense that it is seeking to enrol individuals in defence of peace. It aims rather at strengthening and co-ordinating organisations which already exist for various social or other purposes, and which take an interest in peace. It takes no part in party politics.

The International Peace Campaign has four objectives :—

1. Recognition of the sanctity of treaty obligations.

2. Reduction and limitation of armaments by international agreement and the suppression of profit from the manufacture and trade in arms.

3. Strengthening of the League of Nations for the prevention and stopping of war by the organisation of collective security and mutual assistance.

4. Establishment within the framework of the League of Nations of effective machinery for remedying international conditions which might lead to war.

It will be seen that these principles include the chief peace-keeping provisions comprised in the Covenant of the League of Nations. The International Peace Campaign definitely supports the League. The belief on which the Campaign is founded is that the provisions of the Covenant, with or without some clarification on certain points, are sufficient to maintain peace if the members of the League act up to them. The so-called failures of the League have been in reality failures by members of the League—failures largely due to doubts by Governments whether their peoples would approve of vigorous action on behalf of the League. It is to remove these doubts that the International Peace Campaign exists. It accepts the view underlying the conception of a League of *Nations* that it is the right and duty of the peoples, of which the Nations consist, to enforce peace. The Governments must necessarily be the agents through whom the needed action is taken, but they take it on behalf of the peoples. For it is the vital interest of the peoples to prevent war. It is their blood and treasure which pays its cost, and their prosperity and happiness which are so endangered by it.

It is gratifying, though not surprising, that this Campaign has already received such a large response. In 41 countries national committees have been formed consisting of representatives of organitions interested in peace. These committees are themselves represented, together with certain great international bodies, on an International Committee with an office at Geneva. In many countries great meetings have been held in support of the four principles of the movement, and one great and highly successful International Conference was held at Brussels last September.

Perhaps because of its great success, the International Peace Campaign has been vehemently attacked on various grounds. The favourite charge is that it is a Communist body. This charge is absolutely baseless. The effective direction of the International Peace Campaign, both here and abroad has always been in non-Communist hands. Nor has any attempt ever been made to utilise the movement directly or indirectly for Communist purposes.

Another criticism on the other side is that necessarily the Campaign can do little or nothing in Dictatorship countries, from whence comes the chief danger of war. This is unhappily true. But, in the first place, the countries which accept the four principles are quite strong enough to keep the peace against any aggressor, and, in the second, however rigorous may be the suppression of individual opinion in this or that country, the effect of world movements outside it cannot be wholly excluded. Sooner or later our principles may be trusted to spread themselves all over the civilised world, if we are true to them. Till that happens, the Peace Powers have the right and the power to prevent any turbulent State from committing a breach of the world peace.

Unfortunately all this costs money. We want about £6,000 per annum for the British National Committee to do local work here and to contribute morally and materially to the international work, and we want for that international work a considerable sum. The Geneva office can be kept going with a relatively small sum. But there is no limit to the usefulness of the campaign in stirring up peace opinion all over the world. I can say with absolute conviction that there is, in my judgment, no peace work in the world better worth doing than this.

Contributions may be sent to me at 27, Chester Terrace, Eaton Square, S.W.1.

Yours, etc.,

CECIL.

16, South Eaton Place,
S.W.1.

T. B. J.

Psychology

To the Editor of the GAZETTE

SIR,—Although one is naturally cautious in criticising such an erudite psychologist as Dr. Gillespie, I should like to offer a few tentative criticisms of his most interesting paper. Firstly his comparison of the results of various clinics using different treatment seems to me unscientific. Have these clinics the same criteria of cure? Who says that the patient is cured, the patient or the doctor? (I know a clinic where the doctor discharges the patient as "cured," yet he retains his symptoms and goes elsewhere for treatment!)

The reason why some psychotherapists obtain more dreams containing infantile sexual matter than others is that they do not show any emotion at the recital of matter which others find unpleasant (even though nothing is said the patient appreciates one's attitude to such matters). I am sure that is why, for instance, some psychotherapists never obtain certain types of material at all. For example, many Adlerians will tell one that they never find their patients bringing dreams which contain anything other than the power motif; the sexual material is all suppressed because the patient finds it shocks the analyst.

It is natural in a critical paper of the nature of Dr. Gillespie's that one should find emphasis laid on the points of discrepancy rather than on points where different schools confirm each other. There are, however, many vital confirmatory facts; for example, Zuckerman's observations on apes tend to confirm many of Freud's views. Again, the Behaviourists (even Pavlov himself) have confirmed some of the theories elaborated by the psychoanalysts. This is particularly shown in the importance of the recreation of the original traumatic situation in the production of symptoms and the even greater importance of conflict.

It is inevitable in a science which is young, particularly when it is, as Dr. Gillespie points out, a mixture of sciences, that one should find confusion. Dr. Gillespie has given some valuable suggestions for future development, and added some suitable cautions. I feel that he has not emphasized the real historical line of evolution of psychology as being the discovery and exploration of the unconscious, and in as much as we have done this we have constructed a science, for science is only knowledge.

Yours, etc.,

CLIFFORD ALLEN.

91*a*, Harley Street,
W.1.

Pathologists and Post-Mortems

To the Editor of the GAZETTE

SIR,—If the mutterings of the Dodont to which you gave currency in your last issue prove to be founded on fact, it will be great news for those who have never ceased to hope that Guy's would one day resume her rightful place amongst the foremost schools of pathology.

If, as I expect, there are those who still think that to hand over the post-mortem examinations to the Professor of Pathology is a break with an old and valuable tradition, I would like to point

out that it is in reality a return to an older and more valuable one. The real tradition of Guy's was that post-mortems should be demonstrated by an expert in morbid anatomy, but this tradition lapsed when Dr. Fawcett became a full physician. In saying this there is nothing derogatory to those physicians who have been demonstrators of morbid anatomy since that time. No one remembers with greater admiration or gratitude than I the brilliant and all too brief demonstrations by Dr. Beddard; but both he and Dr. Hurst (to take another example) laughingly confessed in exaggerated terms "that they knew no morbid anatomy," and I doubt if in later days there have been any physician-demonstrators who could have been classed as *experts* in the subject.

The old tradition dates from a time when morbid anatomy was the main highway to advance in medical knowledge, apart from observation at the bedside; the physicians sought eagerly for a post in the post-mortem room so that they might obtain opportunity for the study of morbid anatomy, and their nights as well as their days, when they were not at the bedside, were spent with the cadaver and the microscope. Which of the physicians of the last quarter of a century has really studied morbid anatomy? Dr. Beddard, following in the footsteps of Pavy and Wooldridge, when not in the wards was to be found in the Physiological Laboratory, not in the Post-Mortem Room; and others since have carried on their torch. With all the new approaches that have been opened up during the present century there are now a score of ways in which the young physician can hope to add something new to our knowledge, and if these are to receive adequate attention, morbid anatomy cannot hope to retain the pride of place of an earlier age, for she has no use for the dilettante. All this was clearly seen by my father twenty-five years ago, and he tried to express it in his Harveian Oration in 1912, which he entitled "The Passing of Morbid Anatomy"—a title that was by some misconstrued as meaning that morbid anatomy had no more to teach us. Right up to the end of his life he was probably the most devout worshipper at the shrine of morbid anatomy that Guy's produced since Wilks, but I am perfectly certain that if his shade still hovers over his old haunts it will warmly applaud the return of post-mortems to the expert.

It may not be without interest to recall that, after all, there is some precedent for departure from rigid tradition in this matter. My father was demonstrator of morbid anatomy for fourteen years; he was appointed in the session 1873-74, when he was surgical registrar, and held it for another two years while medical registrar, and his eventual appointment as assistant physician was by no means a foregone conclusion—it was actually opposed by his friend and senior colleague in the demonstratorship, Dr. Fagge, on the grounds that he was too good a pathologist to make a successful physician.

It is, moreover, impossible to hold that the post is essential as experience for the physician, for such distinguished physicians as Dr. Pye-Smith, Sir Frederick Taylor and Sir William Hale-White were never demonstrators of morbid anatomy; neither were Dr. Wooldridge or Dr. Washburn, whom death alone prevented from achieving an equal fame in clinical medicine. Wooldridge was demonstrator of physiology for the short time that he was assistant physician, and Washburn, who had already been appointed the first demonstrator of bacteriology in 1889, continued to hold that post after his appointment to the medical staff in the following year until his death some twelve years later. All these appointments are in keeping with the tradition that demonstrators should demonstrate the subject which they are making their study, and it is quite certain that the demands that morbid anatomy makes on those who make it their study have become not less, but greater, with the years.

Having taken up my pen on the subject of pathology, I should like to add a comment on clinical pathology. The new building that will shortly house all the laboratories in one pathological department provides a chance of getting back to the old and proper conception of "pathology" in its relation to medicine. General pathology, bacteriology and biochemistry are all subjects which may, and indeed must, be studied quite apart from their bearing on clinical medicine, but pathology in relation to medicine (which is what we should be mainly concerned with in a teaching school) is one and indivisible, and includes all these subsections; the gradual growth of each as an academic subject, studied separately and often under separate roofs, has done much to confuse our thoughts as to the proper rôle of the pathologist.

In the long list of members of the Medical and Surgical Staff given in the *Guy's Directory* for 1937 I see that there are a bacteriologist, four assistant bacteriologists, a clinical chemist, a clinical microscopist and a hæmatologist—but not one pathologist! The repercussions of this system of separation are sadly seen in our methods of teaching clinical pathology. I know that in a hospital like Guy's there are difficulties of geography and magnitude that make difficult the realisation of my own ideal of having one central laboratory of clinical pathology to which all requests for investi-

gations from the wards are sent; but as the result of experience I am quite convinced that this is far and away the best procedure both from the teaching and the clinical point of view. The chance of seeing all the pathological investigations on one patient worked out in one laboratory and under the same direction does undoubtedly give the student a much better understanding of the proper function of the laboratory, and on the clinical side unity helps to get rid of the habit of regarding the laboratory as a machine instead of as the workshop of the pathologist.

In my day if we wanted a surgical opinion on a case we sent the patient, say, to Mr. Fagge, but if we wanted a specimen examined we sent it to the " Bac. Lab." or to " Chemi. Lab.," and only very rarely to Dr. Eyre or Dr. Ryffel; and I rather gather that much the same still happens. Not long ago a doctor who had recently obtained the M.R.C.P. sent down to one of my laboratories requests for thirteen investigations simultaneously on one patient, ranging from occult blood in the stool through blood count and sedimentation rate to blood urea, uric acid and cholesterol and thence to a number of agglutination tests. The attitude of mind at the bottom of such a procedure as this (and it is distressingly common) is impossible to anyone who has been taught " clinical pathology " rather than a series of routine tests in a number of separate laboratories, and though, of course, I do not suggest that this is what happens at Guy's, yet I do see in the new building the chance of interlacing the strands of pathology more closely and weaving them into one harmonious pattern in clinical medicine.

Yours, etc.,

G. W. GOODHART.

40 West Cromwell Road,
S.W. 5.

Sport

Rugby

Guy's v. Cambridge University

ON Wednesday, January 27th, Guy's visited Cambridge for the return fixture, and were defeated by 2 placed goals and 5 tries (25 points) to 2 placed goals (10 points).

Both teams were strongly represented, and Cambridge included seven Old Blues, with Forrest, Downes and MacDonald in the back division; J. D. Low, their new captain at scrum-half, partnered by Bruce-Lockhart, the Scottish Trial Cap, and Inglis, Young and Campbell in the pack.

In the first half the 'Varsity had the advantage of a bitterly cold wind, and during this period it looked as though Guy's were in for a heavy defeat, but after the interval the Hospital reorganised their back division by bringing Crawford to fly-half and Baxter on the wing, with the result that they not only held their own but managed to score ten points to eight by the 'Varsity.

As a combination, the Cambridge back division were definitely superior before the change of ends, and had their goal-kicking been a little more accurate they would have gained a commanding lead.

The Hospital forwards held their own magnificently, but the Cambridge pack heeled slovenly, and as a result Low was handicapped considerably. However, when he did get a pass away it was splendidly directed, and Bruce-Lockhart supported him well.

The Hospital three-quarters put up a splendid defence in which Dick was particularly prominent. Indeed, Dick was easily the outstanding back on the field, and both the Hospital tries were due almost entirely to his speed and craft.

Forrest scored the first two tries for Cambridge, the second of which he converted. He had bad luck early on with an attempt to drop a goal from midfield, but he failed to kick a penalty goal from an easy position. Following a loose rush, Carris scored, and a little later Bateman-Chapman went over after a bout of short passing. Near the interval a clever cut-through by Bruce-Lockhart sent Downes over for another unconverted try, and the University led by 17 points to nil.

Soon after the resumption, a sustained attack led to a try by Bruce-Lockhart, which Young converted, and after Young had narrowly missed a drop at goal, Dick broke away, kicked over the line, and Crawford dashed up to score, for Kark to kick a goal.

A cross-punt by Bruce-Lockhart enabled MacDonald to gather and score, but near the end another fine effort by Dick sent Nicholson over for a try, which Kark converted.

Team.—E. C. Sharp; J. P. Crawford, R. C. S. Dick, R. D. Allen, J. L. G. Hartley; A. Baxter, J. Lewis; M. R. Kark, E. S. Nicholson, D. Finnigan, J. R. D. Williams, A. Forbes, F. Walt, H. H. Crabb, C. S. Darke.

Boxing

AT the boxing championships for universities and hospitals, held in Dublin on February 6th, we were glad to see that Mr. C. Halamandres retained his title of Lightweight Champion, and would congratulate him on his success.

The Hospital was represented in nearly every weight, and other results were as follows :—

R. N. Lewis was beaten on points in the semi-final of the Fly-weight.

E. Harvey was beaten on points in the semi-final of the Bantam-weight.

A. Halamandres was beaten on points in the first round of the Feather-weight.

Hospital Information, etc.

Pass List

CONJOINT BOARD.

FINAL EXAMINATION.

January, 1937.

Pathology.

V. H. Bowles — D. C. Light
G. L. Humphreys — J. Paterson

Medicine.

E. W. O. Adkins — *A. D. McDonald
*B. Bell — *N. R. McEvoy
*E. R. Bowes — *A. D. Milne
*G. L. Burgess — C. S. Pitt
*P. M. Davies — *A. N. Redfern
*C. H. Edwards — *A. C. Ricks
D. L. V. Fraser — *A. A. Shein
*D. Graham-Brown — *F. D. Truax
P. H. K. Gray — *R. Y. Taylor
*B. G. A. Lilwall — *M. R. Woods
*M. Lubran — *G. E. Yardley
*H. A. McDonald

Surgery.

K. Chartikavanij — G. M. Johnson
N. C. Creighton — A. R. Leask
A. R. Darlow — J. R. Oliver
F. J. H. Desvaux de Marigny — W. R. Russell
*R. Y. Taylor
R. C. S. Dick — I. E. J. Thomas
V. Drosso — L. C. Thomson
J. D. Ebsworth — A. D. Willis
R. Edwards — F. A. J. Woodland
*P. H. K. Gray — *G. E. Yardley
*T. A. Hale-Monro — *A. L. Young

Midwifery.

N. J. Burnand — *A. D. McDonald
R. C. S. Dick — J. R. Oliver
W. J. Drummond — E. Rosenberg
R. L. Evans — *R. Y. Taylor
E. S. Foote — C. R. Tilly
G. L. Humphreys — *F. D. Truax
W. A. Jones — J. S. F. Watson
A. R. Leask

* Have now completed the examination.

SOCIETY OF APOTHECARIES OF LONDON.

FINAL EXAMINATION.

January, 1937.

Surgery.

*F. J. H. D. de Marigny — P. A. Gardiner

Midwifery.

A. A. Beazley — W. G. Tillman

* Has now completed the examination.

ROYAL COLLEGE OF PHYSICIANS.

M.R.C.P.

January, 1937.

F. L. Apperly — J. R. Forbes
J. A. Brocklebank — N. M. Jacoby
A. M. G. Campbell — W. N. Mann

Changes of Address

E. Clayton Jones, Roughway, Exmouth, Devon.

Papers by Guy's Men

F. D. Howitt and Others. An investigation of internal radon therapy. *B.M.J.*, 1937, i, 208.

R. R. Traill. Recent aids to the prognosis of pulmonary tuberculosis. *Lancet*, 1937, i, 247.

T. Izod Bennett. Nephrosis. *Post-Grad. Med. Jour.*, 1937, xiii, 60.

E. P. Poulton. The oxygen tent. *Clin. Jour.*, 1937, lxvi, 45.

H. St. J. Rumsey. Stammering—Some facts and theories. *Clin. Jour.*, 1937, lxvi, 62.

W. A. Bulleid. The separation of dentistry from medicine. *Brit. Dent. Jour.*, 1937, lxii, 113.

Arthur F. Hurst. Constipation and its treatment. *Practitioner*, 1937, cxxxviii, 121.

E. C. Hughes. Carcinoma of the stomach and intestines. *Ibid.*, 129.

R. W. Ellis. Digestive disorders of childhood. *Ibid.*, 159.

S. R. G. Pimm. Inhalation and spinal anæsthesia, with a note of the history of anæsthesia. *Jour. Royal Naval Med. Serv.*, 1937, xxiii, 36.

Martin A. Rushton and F. A. Walker. Unilateral secondary facial cleft with excess tooth and bone formation. *Dental Record*, 1937, lvii, 66.

Appointments

W. H. Bradbeer, M.S., appointed Honorary Surgeon in charge of Ear, Nose and Throat Department, Torbay Hospital.

Miss F. L. Mutimer, S.R.N., Matron, Royal Berkshire Hospital, Reading.

Births

McGREGOR.—On January 27th, 1937, to Mary (née Gates), wife of Dr. H. G. McGregor, of 136, Heene Road, Worthing—a daughter.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

"WERE angels to write books' they would never write folios." And with all due deference to Goldsmith we doubt whether they would try their hand at "Passim" more often than they could help either. There are times when the Hospital seems devoid of any interest, and now, with the orgies of Christmas and the Residents' Play long forgotten, the influenza has departed, the Dodont has gone to sleep, and even the Sisters, like the little hills so beloved of the Psalmist, have gone off skipping like young lambs, on their springtime holiday. Gossip there is none, news is very scarce, and everywhere around us seems to brood a dull complacence, which is perhaps another name for efficiency. It is true that the pigeons are courting once more upon the roof-tops, and that these fine nights, couples, hardly less restrained, may be seen in Sparricks Row. Signs of Spring indeed, but hardly front-page news, and as we dozed in search of inspiration, we dreamed a dream: that the Rugby team were playing in shirts of grey with red collars, like the patients wear, and that at half-time a nobleman strode on to the field and offered them a pint for every point they scored, and yet they could not win. That the College had been condemned and was to be replaced by a palace with a bath or two, and sanitation far removed from feeding, and many things besides, but, as we said, all this was dreamed, and we must gather up our scanty news and report some concrete facts.

THE Appeal has now reached the sum of one hundred and two thousand, three hundred pounds, to which may be added Lord Nuffield's conditional gift of eighty thousand pounds, and so at the end of the seventh month of its existence we are approaching the end of the second hundred thousand, and have already got more than a third of what is required.

Considering the manifold expenses of the age in which we live, this seems to us to be a satisfactory rate of progress, and we hope that it will continue.

The money lately has come in steadily in small sums, but we would mention that as a result of the Dinner Ball held at the Grosvenor House on December 17th, the Hospital benefited by no less than eight hundred and seven pounds three shillings and a penny. Who gave the penny we were not told, but apparently the sight of the empty Treasure chest being wheeled round quite overwhelmed the dancers, and, in a sudden wave of sentiment, three hundred and two pounds fifteen shillings and sixpence were hurled into it. We are very grateful to those who contributed so generously.

IN our last issue we mentioned several attractive functions which are being organised on behalf of the Appeal, and we have since learnt that the Coronation of His Majesty King George VI may also benefit us indirectly. The Coronation, of course, is not itself primarily arranged on behalf of charity, though perhaps its commercial aspect sometimes overshadows its main purpose, but some of the seats are sold at rather more than cost price, and from the sale of a few of these the Appeal will receive a fair proportion, and we recommend all those who have given up hope of getting a free seat to apply to the Appeal Secretary, who will gladly supply them with details. The seats are in two blocks, one on the ground floor of British Industries, Ltd., in Oxford Street, the prices of which range from 14 to 17 guineas, and

the other on the first two floors of Messrs. Liberty's in Regent Street. Here the prices are from 12 to 20 guineas, and include a champagne luncheon. All these seats give an excellent view of the procession, and both may be approached from behind, so that the main crowds in the street may be avoided. We hope that many will take advantage of this offer.

ANYBODY who has ever lived in the suburbs will be familiar with the menace of Flag Days, which nowadays far outnumber the Saints on any calendar, and many perhaps may welcome an attempt, in London at any rate, to limit them to one a year as far as the hospitals are concerned. No plan has actually been decided on, but a meeting will be held in the Physiological Theatre on March 8th at 12.45 p.m., which will be presided over by the Dean, and to which all students are invited. It is proposed to hold one Flag Day for the whole of the London hospitals and that each shall have its allotted area in which to collect, and at the end of the day shall keep two-thirds of the money which it has received. The remaining one-third shall be pooled, and the expenses of the whole undertaking paid for out of this sum, after which each hospital shall receive a share of the remainder, calculated in proportion both to the total amount it collected and to the number of collectors which it supplied. Therefore it is obviously important that as many as possible should take part in this scheme, and we hope that the gentlemen from the Medical and Dental Schools, who have in the past parted pedestrians from their money with astounding ease, will help us once again.

THE late Sir Alfred Fripp, by his will, left a sum of money to found an annual lecture on Happiness and Success. The sixth of these lectures will be given by Commander Stephen King Hall on Tuesday, March 16th, at 3 p.m., at St. Paul's School, West Kensington, and admission is by ticket. Anyone who desires to hear this lecture should apply for tickets, which are free, to the Secretary of the lecture at 19, Portland Place, W.1.

The five previous lectures have lately been published in book form, and may be obtained from Frederick Reiller, Ltd., price three and sixpence. They were given by Mr. Baldwin, Lord Baden-Powell, Sir William Jowett, Dr. Alington and Sir Alfred Noyes, who, though we know nothing of their happiness, may certainly be described as successful.

WE are often told of people whom we have failed to congratulate upon successful achievements, and, though we doubt whether our congratulations matter more than a trifle, we much regret that we have not noted in a former number the appointment of Mr. Macintosh, F.R.C.S. (Edin.), to the much-sought position of Nuffield Professor of Anæsthetics in the University of Oxford.

Elsewhere in this number we reprint some of the songs from the Residents' Play, and in the song the Staff there is a reference to this very appointment, and it is hoped that the remark concerning the salary of this post is in no way untrue.

THE current number of the *Isis* laments over the stringent regulations designed to prevent members of the University of Oxford attending dances during term, and, while reading this ably written protest, we were reminded of a remark once made by a famous cricket coach in our hearing. He was famous rather for the breadth of his views than for the soundness of his judgment, and, addressing some young professionals at the end of one season, said, with a magnificent gesture with his umbrella, "What you fellows want to do is to dance. Now don't let me see you anywhere but in a dance hall until the beginning of next season."

Such advice we cannot endorse wholeheartedly, but, while sympathising with those affected by the ban in Oxford, we would draw attention to two important dances in the near future. The annual Residents' Ball will be held at the Grosvenor House on March 12th and will, we hope, be even better attended than usual. All Guy's men, past and present, are welcome, and tickets may be obtained on application to the Ball Secretary, Mr. H. R. S. Harley, at the College.

The other attraction, which takes place even sooner, is the Rugby Club's Dance, which is to be held at the Westminster Palace Rooms on Wednesday, March 3rd, and anyone who is thinking of going should consult Mr. C. S. Darke, who is in charge of the tickets.

As a result of the Crossword Competition in the programme of the Residents' Play five correct solutions were received, and it is with great pleasure that we announce that the first to be opened was that of Dr. C. G. Baker. We congratulate him upon his success.

WE would like to remind our readers that the annual subscription to the *Gazette* and *Directory of Guy's Men* (12*s.* 6*d.*, post free) is now due, and should be forwarded to The Manager, The *Gazette* Office, Guy's Hospital, S.E.1.

Obituary

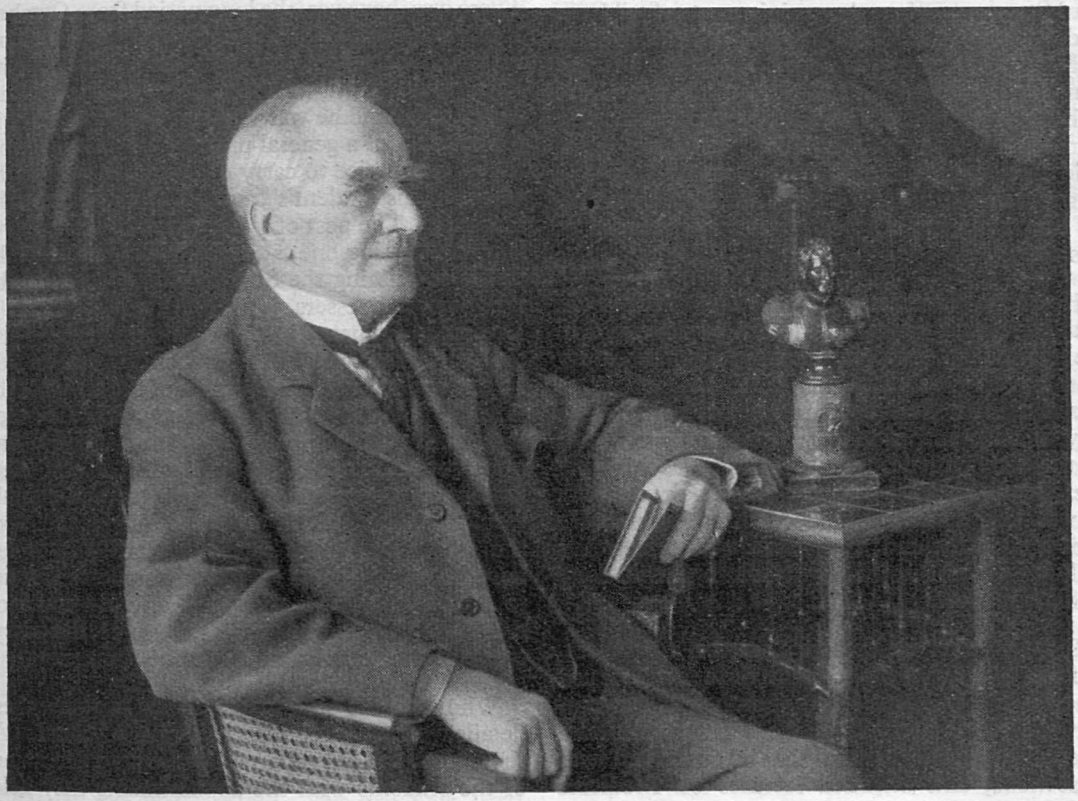
DR. BRAMLEY TAYLOR

DR. BRAMLEY TAYLOR, who died at Weybridge on February 12th, was a Guy's man, with an unusually close family connection with the Hospital. The son of a Guy's man, he married the sister of a fellow student. One of his daughters, a Guy's nurse, married a Guy's man who is the son of one of his fellow-dressers. A son and a nephew are both Guy's men, married to Guy's nurses; and there is a grandson now up as a student.

William Bramley Taylor was born on January 5th, 1847, in the Clapham Road. His father moved to Camberwell Gate before he was two, and there he grew up in the confines of Walworth and of Camberwell among a population of city clerks in small houses with small gardens, the remains of which are hard to trace to-day.

He was at school at Epsom, and at this time his father moved further out to the village of Camberwell; where he practised facing the Green from a house, still standing, that is now a furniture shop with the large garden at the back turned into a depot for trams when these were electrified in and about 1900.

He came up in the winter session of 1865. He has survived all his contemporaries except three. These four were the last living that came up to Guy's before Lister had written the paper that changed the expectation of life for humanity. He used to tell how, when an amputation was being performed, "Old Mon" would stand with the ligatures in his mouth so that he could pass them to the surgeon with the utmost rapidity when the limb was off.



DR. BRAMLEY TAYLOR

Young Billy Taylor, as he was known to all his contemporaries—the Bramley came later with the responsibilities of a practice and a family, and to distinguish him from the Taylors in Kennington

at the other end of the Camberwell New Road—clubbed with several pals to hire a room in the "Ship and Shovel," in which they installed a barrel of beer. There they could go and smoke and have their lunch. Perhaps also they read there while smoking, for it is certain they could not do this in the Hospital Library. Not that they always lunched there, for he used to tell how it was a custom to walk over the Bridge into the City and lunch at Birch's—the shop-front can be seen to-day in the Victoria and Albert Museum—off a glass of Madeira and a cheese-cake that was special to that firm. He and a friend used to pick up a cigar in Lombard Street, where the tobacconist kept for them on a top shelf a box that they had purchased of him. The truth of the matter is that the life of the medical student in the days before organised games was a dull one. There are no records of painting the town blue, or of hilarious nights up West; a barrel of beer in the "Ship and Shovel" and a box of cigars in Lombard Street were the only reminiscences of wildness told at an age when much more doubtful matters might well have been disclosed. Probably he went home each evening to help in the practice of his father, to whom he had been apprenticed. On Sundays he went to church at St. Giles's once, twice, or even three times. According to the exigencies of practice, he kept this up throughout his life, and for many years was churchwarden of this parish.

He never played any games. Lawn tennis did not arrive until he was settled in practice and in the middle of those strenuous years that every man has to pass through. Golf was not introduced by Mr. Balfour until he was well on the way to fifty, and even then it was only available to the rich with leisure. Walking was his only exercise, but it was then only in part a recreation. It was also a normal mode of progression. He kept it up to the end, and would walk three miles daily until well into his eighty-ninth year in spite of his blindness.

In June, 1867, he became a surgical ward clerk, and this kept him occupied until the end of August. There is then a hiatus of two months; in November and December, 1867, he was post-mortem clerk. It is also on record that he continued with dissections, and attended lectures on Medicine and Surgery in his third year. Perhaps his dissections were limited to October and November, for in this month in 1867 he took his first examination for the M.R.C.S. In December, 1867, he became an Assistant Surgeon's Dresser, a post which he held till March, 1868, following this by two months (April and May) in the Medical Wards. From June to August, 1868, he was "Dresser in the Surgery," after which, on September 17th, 1868, he took his first examination for the L.S.A. being examined by Dr. Semple, and approved. Then apparently he read for his Final, for he passed his second examination for the Hall on April 29th, 1869, being examined by Dr. Stocker and approved. There is no note of his ever having been "ploughed" in the records of the Society. To qualify at the Hall and then take his College was the usual course for anyone in those days who did not aspire to academic honours or consulting practice. Having qualified, he became Clinical Clerk from June to September, 1869.

"Clinical" had not then risen to the position of importance that it afterwards held in the Guy's world. The striking thing in the above list is the small amount of time spent in the Medical Wards. Until he was qualified and got Clinical there had only been two months with a definite appointment. There was, however, the long period from October, 1868, to the end of May, 1869, without any post in which he may have been doing rounds with physicians. It must also be remembered that during all this time he was learning medicine daily in the conduct of a general practice. It was possible for an apprentice to carry on with this during the whole of his student's career if he lived near the Hospital. The post of "Dresser in the Surgery" is an interesting one, and it probably entailed the duties of running the Surgery now carried out by the Senior Dressers. W. B. Taylor became a Dresser in January, 1870, in which month he also took his Final College examination. We know that he was under John Hilton. One of the duties of the Dresser was to roll the bandages. He used to tell how Hilton, when he was handed a bad one, would first ask who had rolled it and then, holding the free end between finger and thumb, would deftly send it spinning along the floor the whole length of Naaman Ward. It is believed that he was an Assistant Surgeon's Dresser to Arthur Durham, who had recently come on the Staff. He adored him, as, it seems, did everyone else that ever came under his influence.

Who were his other chiefs is not known; these details were not then recorded by the School. At the end of the old reports may be read the names of the students with the appointments they held, and in these volumes for 1867 to 1868 may be seen names familiar to us to-day, some the grandparents of present students and others the fathers of contemporaries, so that the society in which Billy Taylor enjoyed his time at Guy's was not much different from ours. Ahead of him by six to twelve months was a brilliant group, for while

he was Surgical Ward Clerk, R. C. Lucas and Charles Higgens were Assistant Surgeon's Dressers while the list of Medical Ward Clerks includes the names of F. Taylor, J. Davies-Colley and J. F. Goodhart. Howse, who was shortly to bring Listerism to London, was the House-Surgeon.

For a short time he was a medical officer at Camberwell House, an experience that he subsequently found valuable in practice. He then joined his father, moving away from the Green to Champion Park. After a few years the son separated his practice from the father's, married, and shortly moved round the corner to 145, Denmark Hill, where he remained until he retired. Like most practices in those days, it was built upon obstetrics. He did not talk much of his experiences. His wife once told the writer that the hardest time they had was in the severe winter of 1881; but the only story that he remembers hearing from the old gentleman himself was that of a primipara of forty-two, the wife of his wealthiest patient, who stopped breathing under the chloroform while he was putting on the forceps. He spent an anxious half-hour running round the bed and alternately pulling at the patient's arms to cause her to breathe and at the forceps to cause her to deliver. The result of his efforts was the arrival of a fine boy who was a leader in the youthful local society in the early years of this century. But though he did not talk about his patients, he retained an interest in them, and was duly pleased when a year or so ago a dignitary of the Church whom he had seen into the world obtained preferment.

Towards the age of sixty he was having giddy attacks. He was haunted with the dread that one might come on while attending a midwifery case. This was the final cause of his deciding to retire at an age earlier than otherwise he would have done. It is interesting to note that after his retirement he never had nother attack. He filled in thirty years with those activities that occupy the life of a retired professional man. He was, like all Cockneys, fond of his garden. He was a J.P. He interested himself in Church and Hospital affairs in Weybridge, where he lived. During the war he assisted in the care of Belgian refugees and received from the Belgian Government the medal that they gave for these services, and of which he was justly proud. He had long been deaf in one ear, and was distressed when the other began to fail. This, however, was not so serious as the loss of his sight. One eye had been bad, and on returning from his wife's funeral he developed a thrombosis of the retina in his good eye. This deprived him of central vision, a great loss, as reading had always been a favourite occupation. He struggled to continue with his correspondence, however, until his last years.

He was a member of the British Medical Association for many years, attending the local meetings, but taking no part in its political activities. Having retired from practice, he resigned in 1913. He was a Foundation Member of the old Therapeutical Society, which in 1907 became the Section of Therapeutics and Pharmacology of the Royal Society of Medicine. In this he retained his interest and was a member of the Council for many years.

But of his professional interests, perhaps of all his interests, the Apothecaries' Hall was the chief. He joined the Society by patrimony in 1868, and became a Liveryman in 1883. He was elected to the Court in 1905. He served the office of Master in 1912-13, just twenty years after his father. His year of office was an important one, as it was the year of the International Congress, and he represented the Society at the social functions connected with this.

Dr. Taylor was a tiny little man, thickset, and at that time stout, and, having a huge nose which he had inherited from both his parents, was sometimes known to his colleagues as the Pocket Duke.

He resigned from the Court of the Apothecaries on his eighty-seventh birthday. For twenty years (1910 to 1930) he acted as Librarian to the Society. This is not one of the great medical libraries of London, but it contains some valuable books, especially old Herbals. It was in a state of chaos when he took it on, from which he got it into some sort of order and wrote the catalogue in his own handwriting. In his last three years, being unable to see properly, he grew a beard, which did not improve his appearance. As a young man he had worn the mutton-chop whiskers which were the fashion of the day. For the most of his professional life he was clean-shaven, and with his springy step and well-set shoulders, with hollow back, took his place in the world as one who had worthily upheld the traditions of his profession in general practice, which is the most important sphere of all medical activities.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Influenza

A Clinical Lecture delivered at Guy's Hospital on 5th February, 1937, by Dr. A. H. Douthwaite

GENTLEMEN,—In dealing with a disease of such protean manifestations, I cannot do more in the course of a lecture than touch upon the main features of this topical subject. As a working, though inexact, definition, we may describe influenza as an acute epidemic disease characterised by fever, prostration, pains in the limbs, and a strong tendency to pulmonary complications.

HISTORY

There is evidence that influenza has spread in pandemic form from time to time for many centuries, but any detailed description is failing until the outbreak of 1847-48, which caused widespread havoc. The next pandemic in 1889 to 1890 invaded Europe, Asia and the United States of America, causing many deaths. It was at the close of this phase that Pfeiffer brought to the notice of the medical world the prevalence of the bacillus named after him. For nearly thirty years the disease sank into comparative obscurity, and then burst forth upon us in the pandemic of 1918 to 1919, which swept over the whole world and resulted in fifteen million deaths—that is to say, a mortality vastly in excess of that produced by the four years' war.

ÆTIOLOGY

As I have mentioned, Pfeiffer drew attention to the presence of the bacillus to be found in almost every case of influenza towards the end of the 1889-90 pandemic, and it was assumed until quite recent years that this was, in fact, the causative organism. In 1920 a doubt was introduced of this assumption by Blake and Cecil, who, experimenting with the bacillus by raising its virulence by passage through mice and monkeys, then inoculated monkeys by instillation of these virulent bacilli in the nose. The animals developed an illness within a few hours, and it was characterised by rhinitis, tracheitis and bronchitis. Three of the monkeys developed broncho-pneumonia, and the Pfeiffer's bacillus was recovered from the sputum. It should be noted, however, that all the animals recovered from the illness, except those deliberately killed for purposes of investigation. The experimentally produced disease differed, therefore, from that of influenza, in that there was practically no incubation period, little, if any, pyrexia, except in the broncho-pneumonic cases, no transmission of the disease from infected to non-infected animals, and finally, instillation of the bacilli into the nose of human volunteers produced coryza, but not influenza. It is now generally accepted that influenza is due to a virus infection, and this change of view has been the result of brilliant work by Wilson Smith, Andrews and Laidlaw with experiments on ferrets. They infected these animals by intra-nasal instillation of sterile filtrates of throat washings obtained from people suffering from influenza, and the animals developed a disease after an incubation period of forty-eight hours, which is that of influenza; they were feverish, the temperature rising to 100 or 101°, and there was frequently a remission of fever, followed by a further rise—this again is often seen in human influenza. The ferrets suffered from nasal catarrh and extreme prostration. No pneumonia occurred and no death. The animals developed immunity, and that immunity persisted for several months.

There seems, therefore, strong evidence that the ferrets were, in fact, suffering from influenza, and that influenza was produced by a filtrate which was free from microbes.

As regards other factors in the causation of these remarkable waves of the disease, little is known. In the inter-pandemic periods milder cases of influenza occur from time to time, and thus keep the infection going, but quite suddenly the virulence seems to rise to remarkable proportions, and then we have hundreds of thousands of people stricken down in the course of a few days. It is noteworthy that the young and robust are by no means less liable to get the disease than the old, or very young, or debilitated; in fact, in the last pandemic it appears that the first class suffered the greatest. Parenthetically, it is interesting to note that during the last world-outbreak of influenza there was also an epidemic of encephalitis lethargica, many of the cases at that time being confused with influenza. Note also that the previous epidemic of encephalitis lethargica occurred towards the culmination of the last pandemic of influenza in 1890. Although influenza is still very much with us, encephalitis lethargica seems to have vanished. What the connection is no one can say, but it is difficult to believe that it is merely chance coincidence.

MORBID ANATOMY

If we accept as a fact that influenza is a virus disease, we have to assume that the vast number of complications are the result of secondary invaders of which Pfeiffer's bacillus is but one.

Where does influenza stop and the effect of secondary invaders start? The main incidence of influenza is upon the mucous membrane of the respiratory tract, producing congestion of the mucosa of the pharynx, nose, trachea and bronchi. Frequently there are small hæmorrhages in the mucosa, and this is seen very constantly at post-mortem on these cases. The lower tracheal and bronchial mucous membrane is often extensively denuded of epithelium, and the loss of protective ciliated cells is probably a factor in furthering the passage of micro-organisms into the lower regions. The numerous pulmonary lesions which are probably due to secondary invaders consist of broncho-pneumonia, œdema, diffuse hæmorrhage, sometimes almost massive hæmorrhage in the lungs, giving a sense of solidity to the organ, massive or patchy collapse, small abscesses, interstitial emphysema, multiple infarcts, sero-fibrinous pleurisy, or sometimes empyema presenting a thin watery pus. A non-cellular exudate fills the bronchioles, and the peribronchiolar tissues are seen infiltrated with this homogeneous substance.

SYMPTOMS

The symptoms of influenza develop as a rule after an incubation period of two to three days, and they do vary very much with different outbreaks. Sometimes they may be predominantly respiratory in type, at other times gastro-intestinal. There are certain symptoms which are almost always present. They are, first of all, the remarkable suddenness of onset, so that a patient who starts forth for the day's work in apparently perfect health may be stricken down before lunch-time. Secondly, there is fever with pain in the head, frequently felt behind the eyes, profound lassitude or prostration, pain in the limbs, and often some soreness of the throat. A dry, unproductive cough is apt to arise after the first day or two and may be a persistent and troublesome manifestation.

PHYSICAL SIGNS

These are scanty, and thus make the diagnosis of influenza a matter of some difficulty, except in the presence of an epidemic. They are chiefly redness of the conjunctivæ, dryness, redness and injection of the mucosa of the pharynx and palate, a furred tongue, temperature of about 100 degrees, which persists either as a continued type resembling typhoid fever, except for the relatively short duration, or else it may be remittent. Profuse sweating is the rule. The majority of cases of influenza remain pyrexial for three to five days and then settle by crisis (an important point to remember when trying to assess the value of any treatment). Some cases, however, defervesce by lysis over many days, and a secondary rise of temperature is in either case quite common, particularly if the patient gets up too soon. The pulse is usually full and regular, occasionally bounding in type, and in general it tends to lag somewhat behind the rapidity expected for the particular fever present at the time. Even when the disease is in a very severe form, the pulse rate is in general a poor indication of the prognosis of the case. Blood changes in the nature of a leucopænia are common, white counts of about 5,000 being the rule, the reduction being a descent of the polymorphonuclear leucocytes. The blood pressure always falls, usually twenty millimetres of mercury or more, and this fall may persist, or at any rate the low level may persist for some weeks after apparent recovery from the illness. It is probably in part responsible for some of the feelings of lassitude and giddiness during convalescence. The tendon reflexes are depressed during the acute illness, but gradually recover their normal briskness as the temperature subsides. A scanty high-coloured urine is to be expected in any fever, but in influenza it is also quite common to find albuminuria. Frank evidence of nephritis is, however, uncommon clinically, although at post-mortems it is often found to a greater or less degree.

GASTRO-INTESTINAL TYPE

In the so-called gastric influenza the pyrexial reaction is usually less than that already described, but the main symptom is that of vomiting, soreness in the upper abdomen and diffuse tenderness in the epigastrium. The tongue is thickly coated, and usually there is constipation, but sometimes we have vomiting and diarrhœa in these outbreaks. The pain in the abdomen is described as a raw feeling in the epigastrium and sometimes in the umbilical region. There is no true rigidity to be noticed. In some of these cases there may be localised points of tenderness in the abdomen, and on more than one occasion patients have been operated on on the assumption that they have acute appendicitis. At operation, it is noticeable that the fine blood vessels of the peritoneal coat of the intestine are dilated, giving all the viscera an unusually red colour.

IMMUNITY

Absolute immunity is certainly not conferred by influenza, as most of you know to your cost. We do meet cases in which a patient recovers from one attack and has a further attack within a few weeks, but, in general, immunity is conferred for six months to a year. This correspondends fairly

closely to that of the experimentally produced disease in ferrets. It is interesting to note that antibodies can be demonstrated in the blood of ferrets when they are immune, and still are present when they become susceptible once again to the disease. This suggests that it is necessary to have some local resistance in the nasal mucosa, through which presumably we are infected, as well as a general resistance indicated by the presence of antibodies in the blood. It may be, therefore, that even if one can obtain a serum containing high antibody content, absolute protection by its use will not be conferred.

COMPLICATIONS

The pulmonary complications are quite the most important in all the severe epidemics. I have mentioned to you the types of lesions found in the lungs, and you will realise from this that the physical signs of these complications must be very varied and sometimes difficult to explain. The commonest are moist rales and rhonchi, particularly in the lower lobe, sometimes bilateral, sometimes unilateral, and in association with this, or entirely independent of it, we may find large areas of impairment of resonance and absent voice sounds due to collapse. The collapse is produced by the accumulation of thick muco-pus in the bronchioles, such as one sees so constantly at post-mortems. In the last epidemic there have been many cases in which collapse seems to be the outstanding pulmonary feature, almost massive in character, and giving rise either to the signs just mentioned, or, if the collapse is sufficiently complete, we may get bronchial breathing and increased voice sounds over the dull area. The diagnostic point is, of course, the shift of the mediastinum; that is to say, the shift of the heart towards the affected side. At other times the signs may be just those of lobar pneumonia, although this is not, in point of fact, found at autopsy. Again we have signs of broncho-pneumonia, simple bronchitis, and sometimes in the most toxic cases no signs at all, and yet at post-mortem examination we find the hæmorrhages and exudate which characterise the disease. The sputum, nearly always very tenacious, consisting of great ropes of mucus, yellowish in colour due to the admixture of pus, causes much distress to the patient in his attempt to get rid of it. In severe cases the respiratory rate rises more and more, and its height is quite a useful point in forming a prognosis. Cyanosis may develop into a remarkable form of discolouration which was so admirably described by Dr. Herbert French in a lecture which he gave on the subject in 1921 in this theatre. It is generally known as heliotrope cyanosis, and a better description cannot be given. Should it be present, death will occur. Drooping of the eyelids was another point noted by Dr. French, and can be confirmed by anybody who has to deal with severe epidemics. The greater the droop, the worse the patient. Pleural effusion is not uncommon, but the formation of thick pus is seldom seen. In this year's epidemic the predominating secondary invader has been the pneumococcus, which has been obtained from the sputum in all the cases I have seen, and also from pleural effusions withdrawn. In spite of this, as I have said, the effusions are usually thin and frequently bloodstained, and have to be dealt with by aspiration, and not by open operation. Furthermore, the latter does not become necessary. As the patient recovers from the main disease, the remnant of the effusion is absorbed.

Perhaps the commonest complication of influenza is to be found in the upper respiratory tract and in the ears. In most epidemics there is evidence of sinusitis, though seldom requiring operation. Infection of the middle ear is again commonly seen, and produces redness of the ear-drums and frequently small hæmorrhages. This aspect has been dealt with very fully by Mr. Layton a year ago in a lecture on influenza, and it is clearly outside my competence to enter into it in detail, except to remind you of his timely warning that by no means all these cases should be subjected to myringotomy. The majority of them get well without surgical interference.

Acute gastritis is presumably present in the so-called "gastric influenza," but whether this is due to influenza or to secondary invaders we do not know. There is some evidence that chronic gastritis may arise on the basis of acute gastritis, and thus a form of indigestion may be initiated and persist for many years if not adequately treated. Delirium in some cases is seen, the patient passing into a typhoid state. Meningitis is rare, but has been described, the prognosis being bad. I have seen three cases of jaundice in the last eight years arising in the course of influenza—all three patients died. This, I believe, is the usual prognosis when this complication arises, and it is due to a toxic hepatitis. Widespread polyneuritis also occurs in influenza, and is usually recovered from, but very slowly, that is to say, over a matter of four or five months. Alopecia is common. The falling out of hair may be very extensive, particularly in women, leaving them almost bald, but fortunately one can reassure them, for the hair always grows again, and frequently it looks better than it did before the attack.

The cardiovascular system may be affected, not only by such rarities as infective endocarditis

due to Pfeiffer's bacillus, but more frequently presumably by a toxæmia. Tachycardia arising as a complication of influenza was seen very constantly a few years ago in one of our epidemics, and gave rise to much disability. Physical examination reveals nothing further, and an electrocardiogram is normal. Nevertheless, something obviously has gone wrong with the heart, for the tachycardia becomes worse with exercise, the patient becomes breathless, and if he tries to carry on with his work in spite of it, he has ultimately a complete breakdown which entails many months in bed. Bear this in mind, therefore, and accept the tachycardia as being due to some undemonstrable lesion, but nevertheless a very real one, and treat the patients with further rest in bed and graduated exercise, and recovery will follow.

SEQUELÆ

As sequelæ of influenza, the commonest is asthenia. Everyone knows how miserable and wretched the patient feels for days or weeks after the disease, and the body lacking in energy at this time is often flogged into activity as the result of necessity, and the more it is flogged into activity, the longer it takes for complete recovery. The detailed explanation of these symptoms is not yet with us, but as I have already indicated, many of these people still run a peculiarly low blood pressure, the systolic being sometimes below 90 millimetres of mercury. When they stand up they feel giddy, frequently vomit, and have bouts of tachycardia. A further rest in bed with administration of strychnine or coramine will usually raise the blood pressure, and after a week to ten days all will be well. Melancholia leading to suicide is by no means unknown.

Vascular thromboses are of interest, as occurring as a late result of influenza, and in three cases of thrombo-phlebitis migrans which I have studied in the last few years, influenza preceded this peculiar disease by a matter of a few weeks. In each case there was evidence of residual infection in one or other of the accessory sinuses.

Lastly, I should perhaps remind you of the frequency with which late tuberculous lesions appear to be lit up by an attack of influenza. The history is all too common when we are faced with patients showing signs of pulmonary tuberculosis, that they were quite well until they had influenza, they got up in about a week, returned to work feeling tired, and then perhaps three to four weeks later started cough and loss of weight, and the usual signs and symptoms of which you know.

PROGNOSIS

The prognosis is in the first place affected by whether the attack occurs in the middle of a severe epidemic or pandemic, or whether it is a feature of a minor epidemic. That is to say, the virulence of the whole disease appears to fluctuate, and the odds are very much in favour of a patient's recovery in a minor epidemic, whereas in the major outbreaks it is impossible to give a prognosis because death may claim a patient within a few hours of the onset of symptoms. In general, however, the bad prognostic points are persistent sleeplessness, persistent vomiting, a high respiratory rate, refusal of fluids, leucopænia in the presence of pneumonia, thrombocytopænia with a hæmorrhagic tendency, meningitis, lateral sinus thrombosis, toxic jaundice and heliotrope cyanosis. Naturally, pneumonia in influenza always makes the prognosis grave, but the majority of cases do, in point of fact, recover. Purulent bronchitis, which is seldom seen except during severe pandemics, is seldom survived.

TREATMENT

In the first place, preventive treatment. As you can see from what I said about ætiology, there is very little that we can do to prevent people getting influenza. On general grounds one imagines that the more you keep in the fresh air, and the less you keep in stuffy rooms, the less likely are you to develop influenza, but even this is doubtful, considering the rapidity with which troops went down with influenza during the war, when nobody could deny that they had all the fresh air that they needed. I cannot believe that gargling is of the slightest value, except in so far as it removes the fear of the disease, which is probably of some importance. The use of vaccines, particularly those containing Pfeiffer's bacillus, may be of some value in staving off complications, but naturally, if influenza is due to a virus, they cannot be of any use in preventing it. Work is being done by Laidlaw and his colleagues in the preparation of a vaccine, but as yet details have not been published, and as the present epidemic is over, the value of the method will not be clear for at least another twelve months. The same applies to convalescent serum which we have been collecting at Guy's. On analogy with other virus diseases it seems reasonable to assume that it might be of considerable help, and now that we have the serum, we hope to be able to use it largely as a preventive measure when the next epidemic comes along. I might say that, so far as the treatment of influenza is concerned, it will obviously require huge doses to be of any use, and in the few experiments we have carried out, the results have been suggestive but not convincing.

As to the actual treatment of influenza itself first and foremost, immediate retirement to bed is essential. Secondly, there must be adequate ventilation of the room day and night. This is

of the utmost importance. The temperature of the room may be kept between 60 and 65°, and heavy bed-clothing must be avoided. Plenty of fluids come next in importance, such things, naturally, as water, glucose, glucose-lemonade are all to be favoured, and also milk diluted with water which is taken more satisfactorily than whole milk. If the temperature is only slight and the general disturbance trivial, a much more liberal diet may be given, but I am considering at the moment patients who are rather ill. I am still a great believer in the old-fashioned purge at the onset of a fever. This is one of the few conditions where a purge is, in fact, justified. I have also seen, during the 1918 epidemic, remarkable improvement follow the use of an enema. The headache was relieved, sleep improved, the tongue became cleaner as the result of the only measure which could be employed in the particular circumstances in which I was situated at that time.

Sleep must be obtained, and in most cases 12 to 15 grains of chloral and bromide in a mixture is adequate for the purpose. If cough is troublesome, don't be afraid to use codeine to stop it. The fear of giving opiates when people have signs of bronchiolitis is, I believe, responsible for a great number of deaths. In point of fact, you may be quite sure that you can give the patient a lot of relief from a troublesome exhausting cough, and thus allow him to sleep by giving, for an adult, half a grain of codeine three or four times a day, and yet there is not the slightest danger of drowning him in his own secretions. When he has a collection to cough up, he will cough it up, codeine or not. I am not, of course, referring to old and very debilitated people. To these the administration of opiates, especially heroin, is very liable to bring about death. Codeine is the drug of choice, as it depresses the cough reflex, but at the same time its toxicity is much lower than that of heroin or morphine. It also has less by-effects such as headache and constipation, which are associated with the other drugs. For these reasons I think it is even superior to Dover's powder, which comes a very good second, given in doses of 10 grains. If the temperature is very high, tepid sponging is a method of bringing relief to the patient. Do not use anti-pyretics, which can only obscure the issue, and certainly never help the patients to recover. Certain proprietary preparations have been vaunted as cures for influenza. None of these claims have been proved. A few years ago when there was an epidemic in this hospital, Dr. de Bruyn and I tried out a substance known as S.U.P.36. Half the patients were given this, half were not, and we satisfied ourselves that it had no effect whatsoever in shortening the disease or lessening its severity. It appeared to reduce the temperature somewhat, just as aspirin might, but it did not do the patient the slightest bit of good. I mention this substance particularly because it still enjoys a vogue in the outside world.

In the gastric form of influenza it may be necessary to supply fluids and glucose per rectum, and if one meets cases of vomiting and diarrhœa, the difficulty is a very great one. If necessary, one must give glucose intravenously in such cases, but as the symptoms seldom persist for longer than two or three days, it is not difficult to tide the patient over the critical period. It is here in particular that opium in one form or another is of great value. If vomiting and diarrhœa are bad, then it must be injected, and will give rest, relief of vomiting as a rule, and almost invariably relief of diarrhœa.

I have been criticised before for suggesting the use of opium in cases of infective diarrhœa, but I do assure you that nothing else will control these severe cases, and if you attempt to deal with the gastro-intestinal disease by the exhibition of kaolin or what-not, you will lose your patient, just as they will lose the kaolin by vomiting. From what I have said you will see that there is as yet no specific treatment of influenza, although I think it highly probable that within the next year or two this statement will no longer be true. In the meantime, it is purely a matter of common sense in the management of the acute phase and in absolute firmness in insisting on a prolonged convalescence if one is really going to restore the patient to his previous health without fear of some of the sequalæ which I have mentioned.

Correspondence

The Guy's '89 Club

To the Editor of the GAZETTE

SIR,—As already stated in the letter which you published a few weeks ago, the Guy's '89 Club are holding their 41st Dinner on Wednesday, 26th May, instead of the second Wednesday, on account of the Coronation.

The Dinner will not be at the Trocadero, but at the Hall of the Apothecaries' Society. This opportunity is being taken advantage of as Dr. R. H. Hayes is Junior Warden of the Society this year and is kindly arranging it for us.

The cost of the Dinner will be as usual.

Yours, etc.,

GERALD S. HOVENDEN.

99, Church Road,
Barnes, S.W.13.

Colostomy—And After

A Clinical Lecture delivered at Guy's Hospital by E. G. Slesinger, Esq., M.S.

GENTLEMEN,—There are few of you who will not be called on either to perform the operation of colostomy or to advise patients before or after its performance. There are few operations in which the comfort of the patient depends more on the advice their doctor is able to give them, and it is for that reason I have chosen this subject for my lecture to-day.

In the great majority of cases colostomy is performed for cancer of the rectum, and, although it is sometimes needed in the treatment of conditions such as diverticulitis, innocent stricture of the rectum and imperforate anus, it is mainly in connection with cancer of the rectum that I propose to discuss it to-day.

The first question that needs decision in any case of cancer of the rectum, once the diagnosis is established, is its operability. If the growth is operable, whatever type of excision is decided on, except in very exceptional cases where an attempt is made to preserve the sphincters, colostomy is essential. In such cases we have no decision to make, but have merely to persuade and prepare the patient along lines which I shall mention later.

In operable cases there is, however, a decision, and often one of difficulty and importance, to be made. Before we can advise wisely in such cases we must consider the evidence on two points: Firstly, shall we prolong the patient's life by colostomy? And secondly, shall we increase or decrease the comfort of the period of life remaining to him by the operation?

In the matter of prolongation of life, there is no doubt that in most cases colostomy, if done reasonably early, prolongs life to a variable extent, and of course in those cases where obstruction has occurred it does so very materially. In fact, in the actual presence of obstruction neither of our two questions admits of doubt, because we shall both prolong life and increase comfort by its performance.

It is, however, in the inoperable case without obstruction that it is most difficult to give good advice. For myself, I have no hesitation in saying that in any case of inoperable carcinoma where I am satisfied that by performing the operation I shall decrease the comfort of the patient, I advise against it, irrespective of the question of prolonging life. What, then, are the adequate reasons for performing colostomy in inoperable cancer, apart from actual or impending obstruction?

Frequency, pain and difficulty of defæcation, a patulous or invaded sphincter allowing involuntary escape of flatus, fæces and discharges, the presence of fistulæ, or constant severe pain are the chief indications. The question of increasing stricture and consequent impending obstruction as an indication for colostomy is a more difficult one, as it depends a good deal on the amount of attention the patient is able to have. When diet can be supervised and the bowel can be washed out daily, preferably by a tube or catheter passed up through the stricture, and followed by a suitable suppository, the patient can often be kept comfortable to the end without colostomy, and enabled to lead a reasonably active life. Again, a point I want to stress to you is that a certain number of cases of cancer of the rectum run their whole course, to the onset of secondary deposits and death, with neither pain nor threatening of obstruction, and to perform colostomy on such a patient is neither necessary nor desirable.

On the whole, the worse the symptoms, especially as regards tenesmus and painful and involuntary defæcation, the more can we promise relief from colostomy. The more intelligent the patient, the better their material circumstances, the more will they benefit by colostomy, since they can adapt themselves more readily, and can more easily have the necessary attention and care. Since it is just this type of patient who is most distressed by the occurrence of discharge or involuntary action from the rectum, it follows that colostomy can perhaps be more readily advised in the private than in the hospital patient.

Having made up our mind, therefore, that colostomy is advisable in a case of inoperable cancer of the rectum, what shall we tell the patient? From what I have said above you will see that we are only advising it for the relief of very present miseries, and we can assure him that these will be at any rate in greater part relieved. Painful and frequent defæcation will stop, and pain will be considerably alleviated, while the patient's general condition will greatly improve in consequence, provided the operation has not been done in the terminal stages of the disease. There may still be some discharge from the rectum, as a result of the growth, but this can usually be controlled by adequate treatment, and the discomforts associated with the colostomy will be certainly less than those which it was performed to relieve, provided we only do it on the indications I have mentioned above.

If we now consider the operable case, it is sometimes very difficult to persuade the patient to agree to the operation. The growth is presumably in a fairly early stage, and the resultant discomforts are so far not very considerable, and therefore the patient is often unwilling to face colostomy, about which his ignorant, though well-meaning, friends have often misinformed him, for the relief from something which has not yet become a burden to him.

A great responsibility rests on his doctor in such a case, because without frightening him unduly it is his duty to make the patient realise that a refusal or a postponed decision may make it impossible to remove the growth, and that, on the other hand, if it can be removed the prospects of survival are reasonably good. Far too often the fear of colostomy drives such patients into postponing decision as to operation while they try this or that alleged cancer cure, only to find, when they finally return to the surgeon, that the growth is no longer operable.

There can, of course, be no doubt that a colostomy is a considerable disability, but it is one that a resolute patient can overcome. That, I think, is the chief point to be impressed on the patient before operation. It is a greater disability for poor persons, forced to live in close proximity with others, and with inadequate toilet facilities, but in nearly every case we can assure the patient that with care and co-operation the colostomy can be made to act once a day and once only, and that for the rest of the day it will not trouble him, and will neither leak nor be offensive to those with whom he comes in contact. When we assure our patients of this, however, we must see to it that we make our promise come true. Unfortunately, in far too many cases the after-treatment of a colostomy is left to the nurse, who, competent as she may be, is not in a position to deal with the question as efficiently as the doctor is, or at any rate should be.

Now as to the operation itself. The portion of bowel in which it is usually best to make the opening is in the iliac or beginning of the pelvic colon. The advantages of this position for the opening are that the main pelvic colon is left free for whatever procedure is undertaken to remove the growth, and that the liability to prolapse is lessened. The view formerly held that the lowest part of the pelvic colon should be used, so as to retain the normal fæcal reservoir action of the pelvic colon, has been largely abandoned, as it does not work so well in practice. In very stout subjects and in certain operable cases which are obstructed when first seen, the distal part of the transverse colon may be utilised. In very fat people this is an advantage in that the opening can be placed above the most protuberant part of the abdomen, where it can be more readily dealt with by the patient. On the other hand, such openings are rather more difficult to bring under proper control than those in the iliac or pelvic colon.

In operable cases, where exploration of the abdomen is required, a separate incision should always be made for the colostomy, and the same applies in one-stage operations for excision of the rectum. The two most-used incisions for performing colostomy are the rectus and the muscle-splitting incisions. The rectus incision, in which the colon is brought out through the fibres of the left rectus, is the most satisfactory from the point of view of fitting controlling apparatus afterwards, but the muscle-splitting operation has the advantage of being directly over the colon, and of being less liable to such complications as prolapse of a loop of small intestine. The incision is similar to that for removal of the appendix, only on the left side, and the colon is gently brought out of the wound, taking care that the upper end is pulled fairly taut. A glass rod with smooth round ends is gently pushed through the mesentery close to the bowel, taking care to avoid injury to veins, and rubber tubing is fitted over the ends of the rod to prevent it slipping. If the incision has been rightly judged, one catgut stitch above and below is usually sufficient to close the external oblique. Personally, I usually allow these stitches to take up a little of the longitudinal muscle band of the colon. The skin incision is closed at its ends and a curved piece of skin is excised on either side of the colostomy to prevent subsequent stenosis.

For some time now I have made it a practice to open the colostomy at once. By so doing the convalescence of the patient is very much smoother. Complications such as distension, ileus, and peritonitis are avoided, and the risk of the procedure seems to be nil. My personal preference is for diathermy as a means of opening the bowel, and if it is available it is first used to remove any appendices epiploicæ on the protruding portion of bowel. If it is not available these can be ligatured, and a cautery used to open the bowel. The bowel must be opened freely, either by longitudinal or transverse incisions, or, as I usually prefer to do, by removing an oval portion of the anterior bowel wall. Gauze is placed under the ends of the rod, the separate exploratory incision, if one has been made, is sealed off, and the opened bowel is covered with vaseline gauze. The glass rod should be allowed to remain in position for 12 to 14 days, and should then be replaced by a piece of rubber tubing.

This ensures the spur between the two bowel openings being kept well up until the parts are firmly joined, and prevents troublesome retraction later.

The post-operative course, if the colostomy is opened at once, is usually remarkably smooth. Flatus is passed from the first and there is no distension. No purge is required, although a little paraffin may be given on the third day, and an action usually takes place from the colostomy on the fourth or fifth post-operative day.

The post-operative complications which may occur after colostomy are several, of which the most important are peritonitis and ileus. Peritonitis, when it does occur, is less frequently due to the colostomy than to the abdominal exploration often carried out at the same time, as handling of growths which may be very near to perforation is often a cause of trouble unless the greatest gentleness is used. Direct infection from the colostomy is less frequent with immediate than with delayed opening of the bowel, as in the latter case organisms will pass through the wall of what is virtually an obstructed loop, and suppuration is more liable to occur in the wound than with an immediate opening.

Immediate opening is also the best method of preventing the occurrence of ileus. In a bowel whose musculature is often thin and feeble, the presence of a virtually obstructed loop, as is the case with delayed opening, sometimes leads to increasing distention and finally cessation of peristalsis and the onset of ileus. Prolapse of a coil or coils of the small bowel through the wound alongside the extruded colon is another occasional complication, which is, however, far less likely to occur with the muscle splitting operation than with that done through the rectus.

Of the late complications of colostomy the most important are : Retraction of the spur, prolapse, stenosis and ventral hernia. Retraction of the spur is due either to there being too great a tension on the mesentery or the too early removal of the glass rod. If it is not possible by mobilisation of the colon to bring the required portion out without undue tension, it is wiser to utilise the transverse colon through a separate incision. Prolapse is a rare complication, and as at the anus may consist of mucous membrane only, or of the whole thickness of the bowel. It can usually be obviated by seeing that the upper limb of the colostomy is reasonably taut, although it has been reported as occurring from the lower opening in some cases. Stenosis of the opening is a complication that occurs far too frequently, and is due to contraction of the muco-cutaneous junction. It can largely be prevented by excising an ellipse of skin round the bowel at the time of operation ; but when it has actually occurred requires either dilatation or a plastic operation.

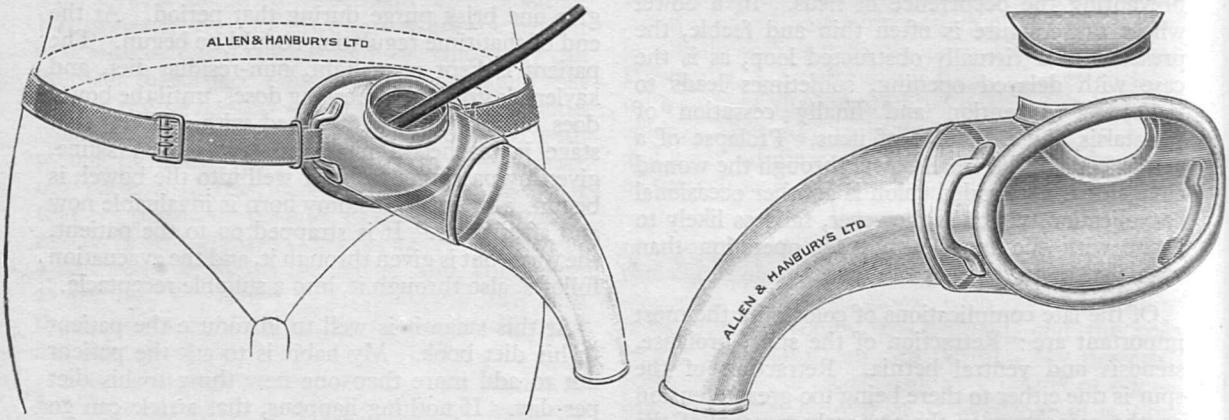
The after-treatment of a colostomy begins when the operation is completed, and should continue until the patient has completely established a routine which enables him to pass his days and nights without fear of accidental actions of the bowel, or of offensiveness to himself or others. It is true that that is not always possible. In old and feeble cases, in those with a chronic cough, and in some weak-willed or unintelligent patients such an ideal condition cannot be established, and such cases require either a constant attendant or are forced to remain in an institution. In the majority, however, especially when the growth has been removed, it is a state of affairs quite possible of attainment, and I know a number of people with permanent colostomies who do their work and enjoy their life fully with only a minimum of discomfort from an operation which it must not be forgotten has only been performed to save them from far worse things.

During the first week that the colostomy is acting little can or should be done to regulate it, because there is often an accumulation of material to be got rid of. Indeed, it is often advisable to give one brisk purge during that period. At the end of that time regulation should be begun. The patient is kept on a light, non-residue diet, and kaylene is given in increasing doses, until the bowel does not act unless interfered with. When that stage is reached a morning wash-out of saline, given by passing a catheter well into the bowel, is begun. Nitch's colostomy horn is invaluable now and afterwards. It is strapped on to the patient, the wash-out is given through it, and the evacuation follows, also through it, into a suitable receptacle.

At this stage it is well to introduce the patient to his diet book. My habit is to ask the patient not to add more than one new thing to his diet per day. If nothing happens, that article can go on the good side of the book, but if it produces flatulence or diarrhœa it goes on the bad side, either at once or, if the patient likes, after a further trial has proved it guilty. In that way the patient quickly finds what are the forbidden foods. They vary from case to case, but soups are nearly always on the bad side, and, curiously, so are radishes. Almost everything else varies from case to case.

When the patient gets up he must have an apparatus. Much as I dislike the cup and bag, I think it is useful for the first week or so in giving the patient confidence, but as soon as possible it should be replaced by an celluloid disk, preferably

one with two rims, held in place by a rubber or webbing belt. It is usually best for the patient to wear over this a band of waterproof material with elastic round its top and bottom, as this gives him a far greater sense of security. When the patient is up, he can sit beside the lavatory, using the horn for the wash-out, and evacuating into the lavatory. He then has a bath, fits the celluloid cap, and, if things are satisfactory, is free of trouble until the next day. Some people need an irritant added to the wash-out, such as soap, treacle or glycerine, but that must, if possible, be avoided, as after a time it is apt to produce excessive mucous secretion. Unfortunately, it is rare for the bowel to behave in this perfect fashion with complete constancy. Every now and then a small action will take place unexpectedly, although usually with a slight warning. Such irregular actions are, of course, a source of great distress to the patient, and are often avoided by two or three doses of bismuth and opium during the week. About twice a month the lower opening should be gently washed out if it is a blind end, to get rid of secretions, and, of course, in inoperable cases washing through the lower bowel with astringents must be carried out to diminish discharges.



Nitch's Colostomy Horn

(Blocks kindly loaned by the makers Messrs. Allen & Hanbury)

Colostomy is compatable with a wide range of activities, and I have a patient who teaches dancing, one who is a railway porter, and several who play tennis and golf. Much depends on the psychology of the patient and not a little on that of the doctor. No one can pretend that colostomy is not a grave disability, but in assessing it one must never forget that it has only been done to avoid far worse evils, and when one takes that into account the price that has to be paid is not quite so big as at first sight it appears. I give you the answer of a patient; an intelligent, charming and fastidious woman, to a letter I wrote her asking her in what way colostomy had upset her life. She writes :—

"I find it difficult to answer your letter, because I should like to be able to tell you wholeheartedly that it makes no difference, but this is certainly not the case. Although, of course, I am quite able to do all the normal things, even down to playing tennis and squash, I do find it a tremendous handicap, because I never know when it may let me down. I never go out without wondering if I shall be all right, and I never accept an invitation without thinking twice about it. In fact, it has taken the *joie de vivre* out of life, because one is never free of the haunting fear hanging over one's head like the sword of Damocles. . . . I am lucky here in that I lead a very quiet life and can rush away to my bathroom when necessary, which happens on an average three or four times a month.

"I can do music, either piano or a stringed instrument, for hours on end, work in the garden, and I can play tennis or squash hard as well as anybody. I walk and I can drive the car to London, 264 miles, in the day, so there is really nothing I cannot do, *but* I never really feel quite safe."

Gentlemen, that lady had a carcinoma of the rectum removed in 1935, and I don't think the price she is paying for her life is too high.

The Residents' Play

THERE are three groups of critics of Residents' Plays. The first, effusive and exuberant, can be heard in the intervals loudly proclaiming, usually to a last year's author, "Stupendous, much better than last year." The second, blasé and sententious, suspend judgment until next day, when, generally in the hearing of the current author, they heavily pronounce, "Not so bad, but, in my opinion, not so good as last year." Ignoring a minority who pass sentence without ever seeing the play, we come to the third group, to which most of us belong, who are not really critical at all. We are merely delighted that it's happened again, and grateful to those who once again have given us our annual good laugh; for during its 30 years of life—and we enjoyed reading its history in our programmes, the Residents' Play has grown into a Hospital Good Thing.

One can imagine in a hundred or so years' time some curious scholar, delving in the ruins and investigating the wreck into which Western Civilisation had blown itself, piecing together a few surviving documents of the plays and writing a precious thesis on "A Parochial Art-form of the Early Twentieth Century." The scholar comments on the similarity to the Mediæval Guild plays, where the Buffoon provides the humour by his discomfiture and where Honour and Virtue always triumph over Treachery and Vice; he notes the constant use of heroic couplets, especially at the end of Acts, to explain the plot, which usually depended on the trickery of one of the clowns or a supernatural element; he is astonished to find that the players are always an arbitrary seventeen, not chosen for any acting ability, and that the Hero is usually elected by them two months before rehearsals begin; he points out that large amounts of fermented liquid, a common vice in that age, were drunk by both players and by audience, who, he stresses, attended, voluntarily; he is amazed by the constant degrading of the female in the play, but regards it as a justifiable reaction to the gradual emancipation of women, which was a feature of that age, while he ascribes the frequent contempt for authority, especially female, as an example of the general decay of manners.

Finally, the historian expresses surprise that yearly authors could be found who were willing to work under such restrictions and exercise their talents in a peculiar art-form which for narrowness of medium he likens to that of Conder and for limitation of subject matter to Paul Potter. He ends with regrets that the original music of these plays, which from contemporary writings, he considers must have been of the highest order, were never put down on paper and had therefore been lost to posterity.

This year, 1937, the curtain again went up revealing a strange sight. No, it is not the new Judo Club's photograph, but three Residents combating their achlorhydric anæmia under the arc lamp of the Light Department. We had scarcely finished admiring Kelsey's jumper, the Gill-Carey torso or the audacity of our Hero in snatching a film star's septic toe from under the very eyes of the Staff, when we learn that something is rotten in the State of Guy's and that the Governors have decided to appoint an osteopath to the Staff in an attempt to attract publicity and patients. A quick scene change, during which our neighbour in the next seat remarked that the plot was obvious—one sight of Kelsey's chest had convinced him it was to be endocrines and change of sex—and we are in the bar at the Whim Pole. It is here, under the radiance of Rosie, the barmaid, that physicians take their pleasure and surgeons enjoy their leisure, and here that Mr. Jollison, the oto-rhino-laryngologist, has decided to convene the Medical Committee as a protest against the long and spirited meetings usually held in his house. Here are gathered the orthopods, Ramblin' Nudli and his faithful Scramm, Shrink the anæsthetist, and Joey Stews, the Senior Surgeon. With Jollison in the Chair, they proceed to the election of an osteopath to the Staff. Rambli' thunders "Why should we tolerate this?" Echo answers, "Why?" He vetoes the election as there is no quorum present, but is foiled by the entrance of Dr. Partial, the chest physician, who has dropped in to inquire about Rosie's cold, and is unwillingly co-opted. But once more the difficult decision is postponed, not this time by a sub-committee, but by a song :—

(*Tune of "All Hail, Professor Pompholyx," from Residents' Play*, 1935.)

All—

The members of the staff are we,
All noble men as you can see,
We never, never disagree,
Our life's eternal bliss.
At meetings in the panelled hall
We pull together, one and all;
There's never any sort of squall
Or semblance of a hiss.

Shrink—

Anæsthetists are in the news,
And Oxford now has had to choose
A man who'll get enormous screws
To be a Nuffield Prof.

Jollison—
In ears and throats I have to peer,
'Cos some can't talk and some can't hear ;
And if there're any tonsils there
I always cut them off.

Ramblin—
An orthopædical defect
Requires great skill and intellect.
We have them both, as you'd expect,
But that's quite *entre nous*.

Scramm—
I often have a *tete-a-tete*
With Lambri, on a type of gait ;
And if he says manipulate,
Of course that's what I do.

Joey—
We surgeons never operate
Too early, or for that, too late ;
And by this means we calculate
The death rate's bound to fall.

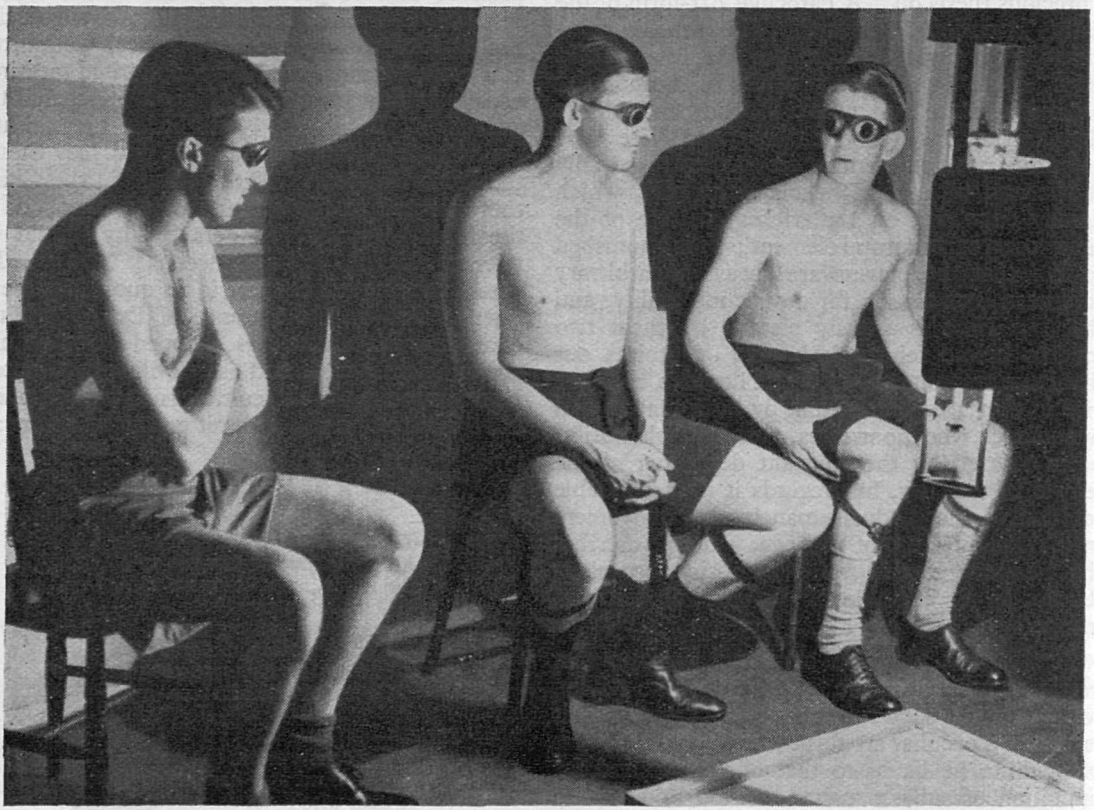
Partial—
Physicians think and ponderate,
And sometimes even auscultate,
But always diagnose too late
To save a life at all.

All—
The members of the staff are we, etc.

Owing to the warm recommendation of Joey Stews, one of the candidates, Sir Blatant Quack, is selected, and they proceed to the election, but with Jollison siding with the Orthopods and Shrink and Partial with Joey the votes are equal, and so—deadlock. Who shall give the casting vote? Why, who more fitted to elect a member of the Staff than Rosie? And so, explaining her credentials for that important decision in a beautiful aria :—

(*Tune*—"*I knew I had been Dreaming*," *from Residents' Play*, 1930.)

When I was young they taught me to respect a Doctor's word,
For he was said to be above the level of the herd.
This dictum as a girl I held—till forced to earn some money.
When to the Whim Pole's bar I came and found that dictum funny.
I soon found out their failings, they are human after all ;
They smoke, they drink, they gamble, and I think they'd even fall.
They do indulge in pleasures mild, but they have to conceal it.
They're safe in here, whate'er they do, they know I'll not reveal it.



Inside the Light Department

I am the Whim Pole's barmaid, and I know the Guy's Staff well;
So what may happen in this pub of course I never tell.
Consultants drink more than you think; I've seen them alcoholic;
And if they're tight they spend the night in Bow Street, quite bucolic.
Next morn they face the problem of "ten shillings" or "one week,"
But always pay up promptly and thus pacify the Beak.
Their wives they tell they've been to see a case of Beri-beri,
But if I'm asked I'll not divulge—that case was really sherry.

Rosie votes, on the same side as Dr. Partial. Thus, by the casting vote of a barmaid, Sir Blatant Quack is elected as osteopath to the Guy's Staff.

Although after closing time, they proceed to the other business, which is to punish Sartorius, our Hero, a mere Resident, for earning money. Shrink cunningly suggests a punishment to fit the crime, and the wicked fellow is deposed from the proud position and the petty perquisites of Mr. Stews' H.S., and is appointed houseman to the new osteopath.

The business over, they all celebrate by one last combined round, when suddenly they are raided by "the slops." All escape except the imperturbable Shrink, and no doubt the bright boys of the Police College had little trouble in finishing his crossword for him.

The third scene is the Front Lodge in the Colonnade, complete with Guy's Hospital porter, remote, unfriendly, melancholy, slow. These adjectives could not apply to the bevy of Registrars and Nurses who assemble and, prancing like sons and daughters of Cecil Sharp, sing :—

(*Tune*—"*Up and Down the Colonnade*," *from Residents' Play*, 1933.)

Registrars—
We work at Guy's for a pittance,
Money means nothing at all;
And having made this admittance
We must have father's remittance—
Or else our prestige will fall,
Or else our prestige will fall.

Round about the Colonnade we're seen all day;
We are the stars, the registrars, we're quite *au fait*
With all the types of dress-wear.
You would never guess where
We get the money to pay.

Round about the Colonnade we have our chats;
Look at our suits, our dainty boots, our Homburg hats,
And our attaché cases,
When we're going places,
To our rooms in West End flats.

First—
I'm a budding Surgeon,
Bent on politics.

Second—
I'm a gay Physician;
Chase the streptothrix.

Third—
I'm a diagnostician,
Taking X-ray flicks.

All—
We are all the Registrars and up to all the tricks.
Round about the Colonnade we stand and wait,
Hoping some day we'll find a way to operate
On the rich and wealthy,
When they're not so healthy,
But we've no Harley Street plate.

Nurses—
You think you're very exclusive,
Dressed in your Registrar's clothes;
We think you're merely abusive,
And when you're really effusive,
Damn it, it's merely a pose;
Damn it, it's merely a pose!

Round about the Colonnade you're seen all day,
Doing your stuff, and hope to bluff that you're O.K.
You're the biggest shirkers,
We're the mighty workers;
Why don't you run off and play?

Round about the Colonnade you stand and laugh,
Trying to please the Honoraries, the noble Staff.
You do not impress us,
Or for that your Dressers;
You're not great doctors by half.

The Meeting at the Whim Pole

When we're sick and ailing
We'll not call you in ;
We know you've a failing
For a pretty chin.
But when we go dancing,
Then you'll score a win—
At that game a Registrar's as good as anything.

Nurses—
Round about the dancing floor we'll trip all night.

Registrars—
When there's a chance we'll make advance and hold you tight.

Nurses—
But you must be careful.

Registrars—
We'll be very careful.

All—
Matron won't think it quite right.

Rambli' and Scramm

The Registrars leave the nurses to bicker and then gossip, and what juicier morsel for the tongue than Sartorius and his film star ! In a few moments his attention to Nan Carding is no longer localised to her toe, but has become generalised into a consuming passion—and he engaged to Nurse Gracilis ! In bounces our heroine, and, lest others exaggerate, they tell of her lover's infidelity. She smothers her emotions as Sister Nuffield floats into their midst, where, preening like a swan before her cygnets, she explains the secret of her social success at Guy's :—

(*Tune*—" *Sisters of the Sick*," *from Residents' Play*, 1933.)

Sister Nuffield—
The Sisters form a motley group of people,
But I stand out alone among the ranks.
I hold my head as high as any steeple,
I've got no time for blusterers and cranks.

I do not think that women are the weaker,
In fact, no man could ever conquer me,
And only those who are the mild and meeker
Would ever be invited in to tea.

And I am not restrained by any law,
A law unto myself I do create.
If anyone should knock upon my door
And ask me why I dared to come in late,
I should just glare or stare or leer or scoff ;
And that would not be all—I'd tick them off.

Nurses—
She is very slim,
She is always prim,
She is graceful and she likes to pose.
She is tart and biting,
Always fighting,
You will note her Roman nose.

She's the driving whip,
She makes nurses skip,
She controls the patients and their friends.
When the day is over,
She is in clover,
Burns the candle at both ends.

Sister Nuffield—
There is no doubt I favour
The upper ten or so,
The people with the flavour
Of breeding or of dough.
The Staff must pander to me,
I lesser men ignore.

Nurses—
She's the shining light,
She's the serpent's bite,
She's the power that makes the engine go.
She is strong and forceful,
Not remorseful—
Lord preserve the R.M.O. !

She wafts the nurses away to their duties, leaving Gracilis to meet Sartorius, rebuke his wantonness and shatter his excuses—the hand of man was ever thus. Rambli', on his way to Out-Patients, explains to Scramm how he intends to foil the intruding Quack, first with a gift of poisoned chocolates and, if that fails, to bait his manipulating pride with a case of tuberculous hip. Quack arrives, and the sight of him shows that Rambli' has a hard nut to crack. He collects his fan-mail and sings his Credo :—

(*Tune*—" *Policewomen's Song*," *from Residents' Play*, 1935.)

Shillings, florins, pounds and pence,
That's the secret of the healing art.
All you want is common sense,
Make your victim with his money part.

The treatment doesn't matter,
His muscles you may shatter,
But see that he shall scatter those
Shillings, florins, pounds and pence—
That's the secret of the healing art !

You see before you the great Sir Blatant Quack,
I will for money manipulate your back.
I'll bend and twist you,
Until you really wished you
Could pay me more to stop.

Your legs and arms I will swing and make them crack,
Your puny frame I'll distort upon the rack.
I'll get your money
While still you're felling funny—
That's Sir Blatant Quack.

"*Accipere quam dare*" surely suits me better,
Than "*Dare quam accipere*,"
That points to me and not the patient as the debtor.
That's not Blatant Quack's way.

I have no use for a slimy hypocrite,
Who wants no money, but just to do his bit.
At least I'm honest,
My ethics may be *non est*,
But that's Sir Blatant Quack.

Meeting his new House Surgeon, he soon realises that a bit of pep is needed all round, and goes off to deal with the Superintendent first, leaving Sartorius to face the camera of a press photographer.

At Out-Patients we find the lovers still estranged, she a prey to jealousy, he a victim of Smoke Room scandal, and not even the longing reproaches of their lost love duet reconcile them. Sartorius, whipped to a fine frenzy, proudly declaims, "Nurse Gracilis, I go, but I warn you—though my path may be long, you shall pay dearly for this." Rambli' and Scramm arrive to do their Out-Patients. Although Sir Blatant has only been appointed for one week, his fame has already spread, for they only pride themselves on two patients and two X-rays, and are hustled out loudly protesting by the resplendent Quack, complete with secretary, chromium plate, white gloves and cash register.

Music by O. Ive

Ramblin—
Guy's Hospital's a dreary place, it's going to the dogs ;
It functions like an engine with a spanner in the cogs.
The Out-Patient Department is an eyesore, you'll agree ;
The congestion and confusion are as bad as they can be.
The walls are cracked, the floors don't meet, you can't turn on the light ;
I'm sure the man who built this place was absolutely tight.
There's no co-operation and there's no efficiency,
And if you don't believe it—well, then, Scramm agrees with me.

Chorus—
Oh, misery ! oh, horror ! why is this place so dull ?
Why haven't we advanced a bit since good old William Gull ?
Our methods are old-fashioned, our buildings obselete,
And yet we get such good results with hips and knees and feet.

Quack—
Guy's Hospital's been modernised since I came to the place.
Administrative problems we're no longer forced to face.
My Out-Patient Department's ultra-modern in extreme,
But as I am a charlatan that just fits in my scheme.
The chromium plate will scintillate amid the neon lights,
And with all this my fees will rise to unimagined heights.

The cause of my success, no doubt, is electricity ;
And if you don't belive it—well, then, just look and you will see.

Chorus—All—
O galaxy of glory, that's why we're in demand,
" Efficiency " our motto, with " Advancement " hand in hand.
Our methods are the latest, our apparatus new,
Because of this we get good fees, but those we cure are few.

Both Rambli's plots fail, for this osteopath doesn't eat chocolates and he makes Sartorius manipulate the spine instead of the hip of the tuberculous patient. Quackery is triumphant, but, when Nan Carding, the film star, arrives, pride receives two falls, for Gracilis learns that the faithful Sartorius advanced no farther than her toe, and Quack, in attempting to manipulate her spine, brings down, with paralysing screams, the curtain on her paralysed legs.

The third act finds Guy's, a month later, in a sorry plight; the patients have deserted, the Staff are idle, Quack alone flourishes, and the Hospital cannot find the five thousand that is the price for Nan Carding's paralysed legs. Even Nuffield's marble halls are empty, save for the sound of the clatter of the cups as the Hostess tries to solace her unhappy favourites.

(*Tune—"Afternoon Tea in Bright," from Residents' Play*, 1931.)

Sister Nuffield—
Come and see me in Nuffield,
Come and have tea in Nuffield.

Jollison—
Nobody dares
Talk of affairs
Other than tea in Nuffield.

Sister Nuffield—
Carefully chosen parties,
Mine are such very smart teas.

Scramm—
Less than a half
Of the Guy's Staff—

Sister Nuffield—
Are my especial hearties.
Only those with striking social attributes
Are included in my visiting list.
Nor will I put up with any substitutes,
Only the best will I have as my guest at—

All—
Afternoon tea in Nuffield,
Sumptuously in Nuffield.

Ramblin—
Lolling in chairs.

Jollison—
Chatting in pairs.

Sister Nuffield—
Watch them at tea in Nuffield.

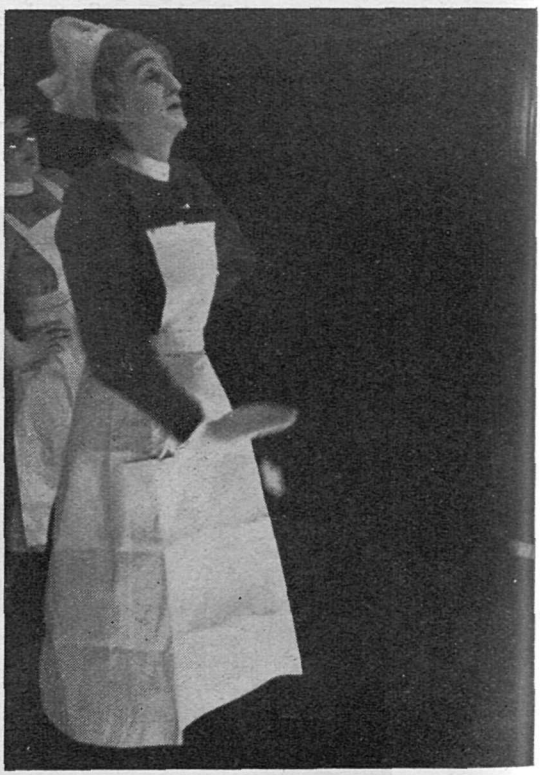
Ramblin—
There are Consulting Surgeons,
There are insulting surgeons,
And they all want afternoon tea.

Partial—
There are Chest Physicians,
There are pest physicians,
There are those who want a fee.

Scramm—
There are Dental Surgeons,
There are gentle surgeons,
There are surgeons old and bold.

Jollison—
There are Heart Physicians,
There are tart physicians,
And those who can treat a cold.

Sister Nuffield—
Then there are patients everywhere,
Those who curse and those who swear ;
Hysterical patients and the clerical patients,
The hopeless patients and the dopeless patients.
The cheerful patients and the tearful patients ;
The skin, the thin, the slim, the dim,
The septic patients and the sceptic patients;
The wealthy patients,
The healthy patients ;
The posh patients,
Oh, gosh patients!
All have the right to ring and cry for
Me, or they think they can apply for—



All—
Afternoon tea in Nuffield.
Oh, what a tea in Nuffield.

Sister Nuffield—
Cony and George,
Come in and gorge
Daily at tea in Nuffield.

Ramblin—
Quite an exclusive hide-out.
Jollison—
Many a scheme's been tried out.
Partial—
Here over tea.
Scramm—
Crumpets and tea.
All—
Afternoon tea in Nuffield.

Jollison—
All the most expensive cars are drawn up here;
People think they're owned by the patients' friends.

Ramblin—
Really they belong to those who've torn up here
In such a hurry and frightful scurry to—

Sister Nuffield—
Come and have tea in Nuffield,
Far from the strife and rough field
Ramblin—
Of everyday life,
Scramm—
Far from the wife,
Jollison—
Soothed by dear Sister Nuffield.

Shrink and Scramm are alone happy in their new-found liberty and independence, and loudly they proclaim it :—

(*Tune*—"*Charwomens Song*," *from Residents' Play*, 1935)

Shrink— We confront you as dogs' bodies,
Scramm— But we cannot bark or wail;
Shrink— Other people drink the toddies,
Scramm— We are there to wag the tail.
Shrink— If the head end says "Delightful,"
Scramm— To dissent we are not free;
Shrink— Though we think it's really frightful,
Scramm— We must always agree.

Chorus—
Both— Now we always do just as we are told,
And we never curse and we never scold;
We have to be as good as gold—
We haven't much scope.

Shrink— When a surgeon's making a fight for life,
On a nurse or student or doctor's wife,
I do not use the healing knife—
I'm giving the dope.

Scramm— Our results are a sight to see,
Ramblin's known to have said to me,
That our work is as good as it can be.

Both— But we do our stuff just as well for that,
And we do not want to give tit for tat,
It's a feather in our hat—
We have never lost hope.

Shrink— I give dopes for Brock and Colley.
Scramm— I have won a dancing prize.
Shrink— I do crosswords and, by golly—
Scramm— I treat men who're twice my size.
Shrink— I may be a bit pedantic.
Scramm— I, perhaps, am rather weak.
Shrink— But at home I'm quite romantic.
Scramm— And my mind I will speak.
Both— Now we always do just as we are told,etc.
Shrink— When I give an anæsthetic.
Scramm— And when I manipulate.
Shrink— I exert my taste æsthetic.
Scramm— I correct the awkward gait.
Shrink— When I'm older I'll be stronger.
Scramm— I will take no orders then.
Shrink— Underdogs we'll be no longer.
Scramm— We'll be powerful men.
Both— Now we always do just as we are told,etc.

Rambli' is desperate, and, to rid the Hospital once and for all of Quack, concocts with Scramm "the perfect crime," which is to shoot him that night outside the Guy's Shop. Although only the first scene of the Act, the lovers become reunited, but their path is still long, for Sartorius is informed by the General Medical Council that, on account of the fateful photograph associating him with the unqualified Quack, he is "struck off."

The last scene finds the lovers forgetting their trouble outside the Shop under a most realistic moon :—

(*Tune*—"*Yellow Moon,*" *from Residents' Play*, 1930.)

Sartorius—
The moon is shining and your eyes look brighter,
The moon beams beckon me to steal a kiss ;
Her smiling radiance makes my task much lighter—
Such a chance I musn't miss.

Gracilis—
The moon intended you to be my lover,
The moon beams shimmering approve such bliss—
Their smooth caresses led me to discover
Just the way to feel your kiss.

Moon up above,
Sanction our love ;
Under your protection here we meet.
With your light
Bless this night,
Scatter star dust softly at our feet.

The moon has placed my head upon your shoulder,
The moon beams show me how to feel the thrill ;
The moon has whispered I should grow much bolder—
She suggests I say, " I will."

Sartorius—
The moon has crowned your head with silver magic,
The moon beams nestle in your fragrant hair ;
Those silly quarrels which to us seemed tragic
Shrivel 'neath her stony stare.

Gracilis—
The moon has shown to me your manly graces,
The moon beams emphasise your gentle strength ;
All ugliness with beauty she replaces,
Brings me to your arms at length.

Both—
Banish your (my) fears,
Dry all your (my) tears,
Tears are rain the moon sheds when she's sad.
Life's worth while
If you'll smile—
The moon and I will try to make you glad.

The moon's entrusted you (me) to my (your) safe keeping,
The moon beams fold my (your) arms around your (my) waist ;
The moon has surely set my heartstrings leaping,
The plighting of our troth she's graced.

They scamper off with the simultaneous arrival of footsteps and footlights. It is the nurses, who fancy free with no patients to tend, have let their imaginations run riot in idolatrous longings :—

Tune—"*March of the Massage Girls,*" *from Residents' Play*, 1930.)

Here outside the Shop we sit,
Nothing left to do but knit.
Chatter, scandal, calumny,
What a nurses' reverie !

We just dream all day that some day we may be the wife of Conybeare ;
Or, if he won't wed, then the Dean instead, we'll entice into our lair ;
Celibacy we do deplore,
When there are handsome men like Law,
But we would not shun just a spot of fun with Gillespie or McNair.
We would throw our lot with dear Eric Scott, if he'd only grow some hair.

Dr. Boland's charm, Mr. Hughes's balm, always thrill us through and through ;
Archie Marston's tact is a well-known fact when there's Slecky in a stew.
Sir Harold Chapple soon will get
His pedigree into Debrett ;
Lollie Forman's eyes rival Kelsey Fry's, but they don't compete with Nils'.
Dr. Douthwaite's smile and his manly style cure neurotic women's ills.

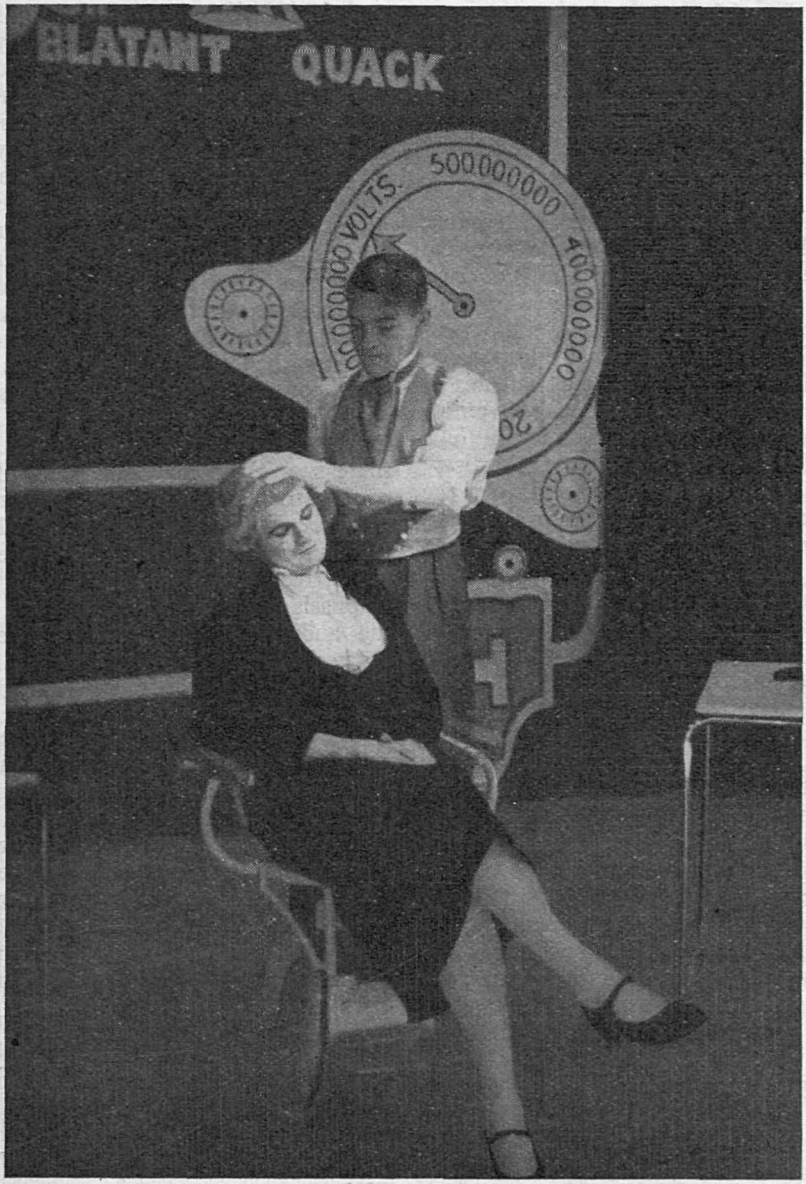
With our friend D. C. we would rather be than in Daddy Poulton's tent,
And we love to dance with that gay dog Lance, for the time is so well spent.
George Doherty we all admire,
Grant Massie sets our hearts on fire ;
We would never jib at old Gynæ. Gib., though no longer in his 'teens ;
But we got a shock when we took Boy Brock for a peep behind the scenes.

Out in Frank Cook's Rolls we can rest our soles, while our sisters have to walk,
But with Bobbie Cann, such a sweet, sweet man, we're content to stroll and talk.
And though our Nathan's always late,
Old Tubby's sometimes here at eight.
We are all endeared to Navasquez's beard, and we have such lovely larks,
For when we're in pain there is Carter Braine with his diathermy sparks.

Rambli' and Scramm arrive to put the finishing touches to their plan, but are disturbed by Jollison, who, demented by the loss of his practice, is narrowly prevented from using his canon for self-slaughter by the carelessness of Scramm. This enrages the Staff the more against Quack, who is seen approaching to his doom. Rambli' is about to press the trigger, but stop ! this upstart and hated charlatan is none other than the honoured and beloved Joey ! General surprise, in which the audience join. Yes, explains Joey, in an attempt to save the Hospital from ruin he *did* assume the guise of Quack, but, realising that the idea was misdirected and had brought ruin instead of prosperity, he had come to make a clean breast and to congratulate the orthopods for their unselfish zeal in foiling him. All is now well, for Nan Carding appears on her paralysed legs, detected as hysterical and cured by the worthy Sartorius, and withdraws her lawsuit, and so, with Quack no longer existent, the Hero is exonerated by the General Medical Council and ready to fall into the arms of Gracilis and the final chorus.

Congratulations to Jacoby and Wass ! This was their first play, and may it not be their last. Their story was amusing and ingenious, and smoothly and evenly unfolded itself, though the final " tucking up " was a trifle slow and over-solicitous. There was plenty of incident and variety, the script was pointed and witty, and there was plenty of fun, with dishes of broad humour for the gallery and salty tit-bits for the groundlings. The " curtains " were good, a marked advance on last year, and the authors moved their play along without dull passages of explanation. It was a kind play, a remarkably kind play, and those who this year were due for pride's purging, must have been relieved to experience no internal gnawings and to find the pill so liberally softened with carminatives.

The music this year was selected from Oliver



Ive's and Charles de Gruchy's songs over the last seven years, and with that magnificent collection to choose from, there was plenty of melody for Scott and Stone to play. However jolly it is to hear the old favourites, it undoubtedly puts an extra strain on the lyric-writers and the singers, for one inevitably compares them with the successes they were in the past. Nevertheless, the authors, with the help of Peter Bishop, successfully put new wine into old bottles, and the service gathered rhythm and speed throughout the week until few could regret the new labels.

The Residents as a body are to be heartily congratulated. They were determined to make the play a success, and they obviously enjoyed doing so; they were rewarded, for the play "went" every single night, and their enthusiasm and their enjoyment was shared by their audiences.

One remarkable thing this year was the absence of weaker brethren; there was no one who had obviously to be fitted in, and all the smaller parts were doubled. All these players cannot be mentioned by name, but I though Gill-Carey's patient was the best of a long line of typical Borough patients; that Adrian Hill's nurse had a character all his own, while his Film Star was both above description or criticism; neither can I forget Sutton's study in still-life as a porter or the studied artistry of Kelsey's fall on the last night. Leeming as the Hero bore his troubles and the injustices showered on him with quiet and engaging dignity—we liked him. Elliott, in his second appearance in a play, struck a new vein in heroines. We are used to coyness and attractiveness, we have been taught to expect tunefulness, and we demand beauty in our heroines, but never have we been given humour or a gem with so many facets; for Elliott combined the come-hither of a Carole with the come-back of a Claudette, the attack of a Myrna with the reserve of a Miriam, and throughout one could sense the charming pedantry of Annabella occasionally peeping out from the racy flavour of Nellie Wallace. Humby brought to the double rôles of Rosie the barmaid and the important Sir Blatant Quack a professional finish that is, naturally, seldom seen among Residents, and his excellent singing of his two songs in contrasting styles will long be remembered. There were many character parts, and among them one must mention Moir, who, helped by an amusing script, got every ounce of succulence out of the part of Shrink and his duet with Darke as Scramm was the hit of the show; Cashmore, who was surprisingly good as Jollison, and whose gestures, although a little choreic at first, later mellowed into a perfect likeness; and lastly Musgrove, who brought to Rambli' a blend of flamboyancy and emphasis that made a character part worthy to be compared with the best of past years—a big achievement. Hammond, as Sister Nuffield, aided by the advantage of the physical bearing of a Duchess and the training of a Bishop, easily surpassed previous presentations of that famous hostess, a character whose infinite variety Residental or the Staff's custom never stales.

The play was again produced by Bishop, aided by an enthusiastic band of back-stage workers under the direction of James Brown. It is therefore almost unnecessary to say that the production was smooth, thorough and polished, for during his years of producing Bishop has worked with a high standard in mind. His ideal has been to banish from the Residents' Play all the worst faults of amateur theatricals, the inability of actors to stand still, bad timing of laughs, the cheerful disregard of lapses of memory or the force of gravity on the scenery, and, above all, the forcing of encores on an already satiated audience. For this relief we owe him much thanks, and this year's play and the absence of any serious snags we hope has rewarded his efforts. He has now equalled the record in producing Residents' Plays; next year we hope to see him break it. On one point only we feel his actors occasionally let him down: there was a tendency for some of them not to confine themselves to their lines and to continue *sotto voce* when the next cue had been taken up. This surely is the hall-mark of the amateur who at last feels at home on the stage, and the overemphasis of jokes by such devices as pointing at the audience compares unfavourably with the professional who "gets them" by orthodox means.

One more criticism. Surely the habit of long and laudatory speeches on the last night is the worst blight of the amateur production. These are trying to the audience and (although the tedium this year was relieved by banana throwing) embarrassing to those on the stage. Those who helped the play to success certainly merit thanks, but the audiences' applause and their own enjoyment should suffice. Good wine needs no bush, and the end of a Residents' Play needs no such brush.

And so, with very pleasant memories, we must wait for next year, when another band of Residents will say, "Invest me in my motley, give me leave to speak my mind. . . . If they will patiently receive my medicine." Yes, motley's the only wear.

C. G. B.

Sport

Rugby

Guy's v. Gloucester

AT Honor Oak Park on Saturday, January 30th, Gloucester just managed to win a most exciting game by a placed goal and a try (8 points) to 2 tries (6 points).

The conditions were about as wretched as they could be; continuous rain had made the ground waterlogged, and until the visitors arrived it was doubtful whether the game would be played. However, in the first half both sides made light of the weather, and early on, one had the pleasure of seeing football of the highest order, but after the interval the mud was so thick and heavy that several players were glad when the whistle sounded for no side.

Owing to the County Championship, Gloucester had several familiar faces missing from their side, but their reserves, including Boughton, the International, proved a powerful force and fully held their own.

Guy's had their captain, R. C. S. Dick, playing in the same match for Kent, and as he would not be available for the first round of the Hospital Cup, Guy's fielded the team which was likely to represent them against St. George's.

It was expected that Halamandres would be fit enough to return to the side at full-back, but after a try-out earlier in the week it was decided to play Sharp and not risk any chances.

The Hospital experimented further with Crawford at fly-half, Allen took the place of Dick in the centre, and Baxter occupied the position on the left wing.

After a shaky start, Lewis and Crawford came out of the ordeal with flying colours; they were faced by one of the best pairs of half-backs in the country in Meadows and Day, and to have proved their equal was no mean effort.

Gloucester started full of confidence, and at once established themselves in the Hospital 25. However, great defensive work by Darke, Robin and Nicholson drove them back, and then Guy's began to see more of the ball.

In spite of the close attentions of Bayliss and Welshman, Lewis managed to get the ball away cleverly from the set scrums, but passing movements broke down time after time owing to the slippery state of the ball.

With Meadows playing at the top of his form, Guy's had rather a worrying time, especially when Stevens and Early combined beautifully on the right. One magnificent movement broke down a few yards from the line when Bayliss got offside. A little later Crawford intercepted another bout of passing, dashed some forty yards down A little later Crawford intercepted another bout of passing, dashed some forty yards down the centre, passed to Hartley, who made ground when taking the pass, but managed to scramble over the line on his hands and knees to register a try, which Kark failed to convert.

Gloucester retaliated almost immediately. Their forwards, ably led by Morris and Edwards, dribbled down field and Meadows was up to gather, and Ivor James went over in the corner to make the scores level.

Even play followed until just before the interval, when in a fine individual effort Meadows worked his way through and scored near the posts for Boughton to add the goal points.

The second half started sensationally. Following loose play in midfield, Darke picked up and ran some yards before passing to Birks, who was in close support. The latter carried on a passing movement with Walt, who eventually crossed the line for a try near the posts, but Kark had bad luck with the kick at goal, which struck the left upright.

From now onwards both sides went all out, and the excitement was intense, especially in the last ten minutes, when Guy's were pressing furiously.

Only superb tackling and good covering by their forwards saved Gloucester. On two or three occasions the visitors worked their way to the Hospital's 25, but Guy's fought back magnificently, and Allen, Hartley and Baxter were stopped only a few yards from their objective.

The finish reminded one of a thrilling Cup-tie; the enthusiasm of the few spectators present added to the excitement, but after a rousing finish Guy's had to admit defeat by the narrowest of margins.

The Hospital forwards were excellent, both in the loose and set scrums, and fully deserved the praise they received after the game.

Boughton, at full-back for Gloucester, kicked with admirable judgment and never put a foot wrong.

Team.—E. C. Sharp; J. L. G. Hartley, P. H. Birks, R. D. Allen, A. B. Baxter; J. P. Crawford, J. W. Lewis; H. H. Crabb, E. S. Nicholson, M. R. Kark, D. P. Finnegan, J. R. D. Williams, F. Walt, I. Robin, C. S. Darke.

Inter-Hospitals Cup—First Round
Guy's v. St. George's

AT Richmond on Thursday, February 4th, Guy's easily defeated St. George's in the first round of the Hospitals Cup by 2 placed goals and 7 tries (31 points) to a placed goal and a try (8 points).

Although the Hospital won by such a handsome margin it cannot be said that the display given was satisfactory. The forwards had a hard battle, especially in the open, where Quayle, Vere-Hodge and Mant played a bustling game which gave the Guy's pack something to think about in the loose mauls and rushes. However, with Nicholson hooking so well, the forwards had a comparatively easy passage, but with the exception of Darke and Walt, they were slow in coming round.

The passing between the backs left a lot to be desired, and had they been opposed to more experienced opponents, they might have had to pay dearly for a lot of the lobbed passing which took place.

After scoring an excellent try in the first two minutes, Allen made the mistake of trying, time after time, to beat an indifferently positioned defence on his own, when a pass inside or to his wing would have led to a score.

Kark converted Allen's try, and for nearly a quarter of an hour St. George's kept their line intact. However, Guy's had one good spell during which Lewis, Birks and Hartley scored tries, the second of which Kark converted.

Just before the interval St. George's scored an unconverted try when Quayle kicked ahead from a dropped pass and Cardew charged down a kick by Sharp, followed up, and just managed to win the touch-down.

Early in the second half Guy's scored at regular intervals through Darke, Allen, Baxter and Birks, but Kark was unable to add the extra goal points, although on one occasion he hit the upright.

Following these reverses, St. George's retaliated and their efforts were rewarded when Cardew dribbled very fast from half-way and Fletcher was up to touch down and Weston converted.

Near the end Hartley added another unconverted try for Guy's.

Team.—E. C. Sharp; A. B. Baxter, R. D. Allen, P. H. Birks, J. L. G. Hartley; J. P. Crawford, W. J. Lewis; M. R. Kark, E. S. Nicholson, H. H. Crabb, J. R. D. Williams, A. Forbes, C. S. Darke, I. G. Robin, F. Walt.

Hospital Information, etc.

Notice

GUY'S HOSPITAL, S.E.1

Applications are invited for the post of Assistant Medical Officer to the Salomons Infant Welfare Centre for one session weekly on Thursday afternoons.

Applications should be addressed to the Superintendent, Guy's Hospital, on or before Monday, 1st March. Further particulars as to the duties of the appointment may be obtained from the Superintendent.

Copies of testimonials will not be required, but candidates should submit the names of one or two persons to whom references may be made.

H. L. EASON,
Superintendent.

Pass List

UNIVERSITY OF CAMBRIDGE.
Diploma in Medical Radiology and Electrology.
PART I.
February, 1937.
J. A. Brocklebank.

Papers by Guy's Men

T. Izod Bennett. Nephrosis. *Post-Grad. Med. Jour.*, 1937, xiii, 60.

D. W. C. Northfield and Another. The fate of thorium dioxide (Thorotrast) in cerebral arteriography. *Lancet*, 1937, i, 377.

L. J. Witts. Ritual purgation in modern medicine. *Lancet*, 1937, i, 427.

Guy's Hospital Reports.
January, 1937, No. 1, Vol. lxxxvii (Vol. xvii, 4th Series).
Contents.

T. A. B. Harris and E. H. Rink: A modification of the Howard Jones technique for the use of percaine in spinal anæsthesia.

W. Lindsay Neustatter. The nature and relationship of functional nervous disorders to rheumatism in childhood.

R. H. S. Thompson and G. Payling Wright: Studies on the chemistry of Gaucher's disease; an analysis of three spleens.

G. W. Nicholson: Studies on tumour formation, xviii.

T. W. Adams and E. P. Poulton. A new study of heat production in man.

Changes of Address

E. Clayton-Jones, "Roughway," Exmouth, Devon.

R. O'Donoghue, 12, Upper Wimpole Street, W.1. *Welbeck* 6002. (*Home—Gulliver* 2810, *unchanged.*)

Eric Waite, 9, Imperial Square, Cheltenham. *Cheltenham* 2988.

Birth

TINKLER.—On 12th February, 1937, at the Queen Victoria Nursing Institution, Bath Road, Wolverhampton, to Enid, wife of Stanley N. Tinkler, L.D.S. Eng., of Walsall—a son.

Death

REY.—On 13th February, 1937, at 24, Tennyson Road, Bognor, Sussex, Dr. Jules Frederic Rey, aged 58.

EDS. {A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *13th March 1937* — *Number 1269*

PASSIM

WE once heard it remarked that there was not a child within fifty miles of London who had not at some time been taken to see Dr. Cameron; and if due allowance be made for the vivacity of the remark it may be considered as an approximation to the truth. We have commented before in these columns on the attendance at our Children's Out-Patient Department, which exceeds that at any other of the voluntary general hospitals in London; we have commented also on the accommodation for in-patients, which, on the other hand, is less than that at any of those hospitals. Indeed, this has been a matter on which we have long felt strongly, and have often expressed ourselves, and the disparity between the in-patient accommodation for children and the out-patient attendance has been for years one of the worse scandals of the Hospital.

The history of the Children's Department must be one of the most enervating and discouraging episodes in the whole development of Guy's. Before the War, Dr. Cameron, with commendable energy, agitated that adequate in-patient accommodation for children should be provided. By the beginning of the War plans had actually been drawn up, and had been discussed between Dr. Cameron and Sir Cooper Perry, for the building of a special ward on the top of Hunt's House. With the War the project was abandoned, and after the War it was shelved.

Temporary relief was afforded through the generous donation of money by the inhabitants of Bermondsey and Rotherhithe, which provided a War Memorial of a most valuable and sensible kind in the shape of in-patient accommodation for fourteen children. These were housed in a building which stood at the Newcomen Street end of the Park, and, small though the number of cots was, this step constituted a real advance. Recently, however, with the introduction of the Paying Block provided by Lord Nuffield, even this had to be sacrificed, and Nuffield House has been erected on that site. The children were then inadequately and inconveniently lodged in a corner of John Ward, and they, deprived of the open air playground which they had previously enjoyed, in their turn deprived the Clinical Assistants of half their male beds. Within the last few months they have been transferred to Bright Ward, previously occupied by paying patients, but now rendered obsolete by Lord Nuffield's munificent provision. And there they have remained, these fourteen cots, in a ward unadapted for their needs, an ironic comment on the efforts of the pædiatricians over twenty-five years to secure what was no more than their due.

Over a year ago, and before any kind of Appeal to the public was launched, we suggested that the needs of this Department should be stressed most strongly in the possible event of an Appeal being made.

It is therefore with the greatest pleasure that we have read that no less a sum than £20,000 has now been secured to be devoted exclusively to the development of a Children's Department. The late Mr. Caleb Diplock, a resident of Polegate, Sussex, who died in 1935 at the age of ninety-five, left a sum of £300,000, of which a large portion was to be distributed among such charities as his executors thought fitting. Fortunately, among those executors was Dr. Lionel Handson, of Willingdon, Sussex, an old Guy's man, a friend, contemporary and fellow student of Mr. Eason and a house physician to Sir William Hale White. Dr. Handson, knowing the importance of pædiatrics and recognising how handicapped was the teaching at Guy's by the miserable inadequacy of in-patient accommodation,

secured for us £20,000 out of this sum. We, and future generations after us, both of students and no doubt of parents, as well as the children themselves, are greatly indebted to Dr. Handson for his enterprise in obtaining for us this splendid gift; it is surely not presumptuous to add that we feel he has served great interests.

The following definite facts emerge. The ward is to be called the Diplock Ward, and a plate is to be placed therein in a prominent position stating that the ward was built from funds granted by the Executors of the late Mr. Caleb Diplock, in order to raise a memorial to him.

For the rest we can only speculate. It seems likely that between thirty and forty cots will be provided, and some of these may be reserved perhaps for surgical cases. The whole of the old Bright Ward will be reconstructed, and it will be possible to have reception rooms for temporary quarantine and prevention of cross-infection, isolation rooms, sun parlours, balconies, a diet kitchen and special bathrooms.

At the same time an opportunity is now available for redressing another wrong against which we have often protested. It seems to us quite preposterous that there should be cots in the general wards. In the first place, adults, many of whom are seriously ill, are subjected to persistent crying and screaming of children who are either naturally undisciplined or rendered undisciplined by the discomfort of illness, or both; and in the second place, we feel that the effect upon the child of being placed in surroundings where there is much adult misery and distress, and where there is frequently adult behaviour of a kind calculated to give neither comfort nor reassurance, can hardly be beneficial. Were the physicians, under whose care are the cots in the general wards, to co-operate, all the cots could in future be transferred to the Children's Department—a reform which we feel to be necessary. The amount of teaching on the cots in the general wards is practically negligible, and there can be no disadvantage to such a rearrangement comparable with the benefit secured by putting it into effect.

It remains only to express one pious hope. We shall not have the advantage for very much longer of the presence of Dr. Cameron as a member of the Visiting Staff; we, in common with everyone who has considered the matter, feel that he has been most unfortunately treated over the matter of the in-patient accommodation for his department; we hope that the new department may be completed before he makes that retirement to which we look forward with great distress. It can hardly happen now that he may receive much benefit from the provision of what he has hoped and worked for for so long, but now that the opportunity of such provision has actually arrived, we hope that we may be spared the last irony of seeing Dr. Cameron retire still unrewarded.

▭

WE often compare, in the privacy of the editorial office (for of course we would not dare in public), our little community with that of Cranford. There is the same changelessness—we had almost said immutability—the same respectable regard for tradition, the same quietly even tenor, so that should it happen at Guy's that a change should come about, we, like those wearers of lace caps and players of Preference, stand regarding it in quiet amaze.

It is true that the present change of which we are going to tell you has been considered for a long time, certainly beyond our own memory; indeed we, of the *Gazette*, who are so rarely in advance of our time, actually announced the change as immediately impending just a year ago. But now it is indeed accomplished.

It has long been realised, and not only by the armchair critic, that there has been too great a shortage of beds for the Special Departments. It is partly this need that has led to the determination to reconstruct the surgical block, and the success of efforts in this direction will be largely determined by the results of the Appeal. The problem of the Special Departments housed in the Medical Block cannot be met in this way, and a scheme which will enable these to be enlarged without financial outlay has had to be devised.

The enlargement of the Special Departments is desirable, indeed essential, both from the point of view of the patients and the students. It must be realised that work in the Neurological Department has come to be a privilege, and one which not more than 25 per cent. of students passing through the Hospital can attain, owing to the restrictions imposed by the small amount of clinical material available. Again, it has always seemed to us unreasonable that one of the physisians to the Skin Department should have to conduct Out-Patients without having any beds at his disposal for the admission of deserving cases. These and other shortcomings, such as the inadequate accommodation for the departments for tuberculosis and psychological medicine and for the Nephritis Clinic, are in themselves reasons for the introduction of some change.

This cannot be done without rebuilding, unless the general pool of beds is increased by handing over and redistributing those beds which had been previously reserved for the Clinical Assistants in Miriam and John Ward. Since these beds number thirty-eight, it will be seen that such an

addition would be substantial. With this rearrangement comes the possibility of making a more equitable distribution of the number of beds available for males and females respectively. Hitherto there have been ninety-nine male and sixty-eight female beds in the general medical wards. By suitable rearrangement there can be henceforth eighty-nine male and seventy-eight female beds. In order to accomplish this the sex denominations will be changed as follows :—

On the first floor Addison will remain Addison, a male ward.

On the second floor, Mary will become a male ward, and will be named Bright, while Stephen will become a female ward and will be known as Mary.

On the third floor, Clinical (Miriam and John) Ward will be a female ward and will be known as Miriam.

This will mean that each of the Senior Physicians will have twenty-four beds, each of the Assistant Physicians nine ; the number of beds available for the Psychological Department will be increased from four to six, the Skin Department will gain three, two of which will be for Dr. Forman, and there will be six more beds for neurological cases. Four beds have been allotted to the Nephritis Clinic, which has hitherto officially had none, and the Clinical Research Unit will gain two beds. In the memorandum submitted to us there was the further somewhat surprising award of eight beds to Dr. Hampson for the use of the Tuberculosis Department. We ascribe this to a clerical error, but the confusion with which the matter is surrounded prevents us from making any authoritative pronouncement.

It has not yet been decided whether the Sisters will move with their patients or stay in their wards, but we are told that the former will be the case unless some unexpected difficulty should arise. This scheme, which has been passed by the Court of Governors on the eve of going to press, is due to come into operation on April 16th, 1937.

It will be seen that the following advantages accrue : The number of beds available in the general medical wards will be increased by thirty-eight ; students who may heretofore have had to face the examiners without having been taught on a single neurological case will have six beds at their disposal ; hitherto, within our memory, there has been no ward teaching on skin cases. There will now be three beds available ; opportunity will be afforded for study of recent work on nephritic cases ; there will be an increase of two in the number of beds for psychological cases, and finally the comparatively greater pressure of the female waiting list will be relieved by the more equitable distribution among the sexes. The ambiguity of the memorandum prevents us from stating whether there will be an increase of tuberculous subjects available for general teaching.

It cannot be denied that these advantages are considerable, but, as has already been explained, they can be realised only by the abolition of Clinical Ward as such. Hitherto this has been reserved for the exclusive use of the six Clinical Assistants. The appointment of " Clinical " has been held for three months, and the six Clinical Assistants have been selected from among those about to be or newly qualified ; during their tenure they have been taught systematically on their thirty-eight cases by Assistant Physicians, and, though nominally under the supervision of a house physician, they have been, in fact, in charge of the cases under their care. Each Clinical Assistant has " taken in " for a week in rotation, and has had the opportunity of admitting to his ward any medical emergencies attending the Hospital. In addition, the appointment has rendered opportunity for becoming familiar with laboratory work and the technique of routine investigations.

Thus the duties of the Clinical Assistant have provided a gentle introduction to the responsibilities of medicine (which may so often seem alarming to the newly qualified), as well as to the practical details of treatment which there is sometimes a tendency to overlook in an academic training. Of the six Clinical Assistants it has been customary that four should subsequently be elected to the post of Assistant House Surgeon, and thus proceed to the House Appointments proper.

Many have considered that the Clinical appointment is among the most valuable obtainable at the Hospital ; and, independently of making this remark, we find, as early as 1837, Mr. Babington saying :—

> " Each student who has passed three months in the Clinical Wards is ready to admit that the period has proved the most profitable portion of his medical education, and regrets the necessity of resigning his office at the moment when he has just learnt to turn it to the best account. Under the guidance of experienced physicians the student is instructed how to make observations on the sick, and how to interpret the signs of disease."*

It appears that the appointment of Clinical was started by Addison in 1828, and indeed there may even be reason for believing that, apart from that of surgical dresser, the other student appointments were developed later. From 1828

* *Guy's Hospital Reports*, First Series, Vol. I, v, p. 5.

until 1859 the Clinical Ward was housed in the Surgical Block. There was one female and one male ward with a Clinical's Room between, the plan being similar to that of such wards as Job and Luke now existing, except that the Clinicals' Room has been replaced by a single door.

In 1859 the Clinical Wards were transferred to a building standing in the Park, which had been erected in 1744 for the purpose of housing twenty confirmed lunaticks, and there it remained until 1919, when the building of the present Massage Department necessitated its demolition. Even then the appointment was not abolished, each physician in turn giving over his beds to the Clinical Assistants for a period of three months. Although this arrangement was considerably to the detriment of the students who were deprived of a large number of the general medical beds which had been previously allotted to them, it was continued until the rebuilding of the top of the Medical Block provided the Clinical Assistants with a new home. Here they have remained until the present time.

This appointment is now abolished.

The Medical Committee has recommended instead the appointment of six persons to be styled "Assistant House Physicians and Clinical Assistants." Lest the same difficulty strike our readers as occurred to ourselves, the Assistant House Physician and Clinical Assistant is one and the same person. As before, they are to be appointed for a period of three months and may proceed to the ordinary house appointments. But there is one important difference: whereas before it was possible to act as a Clinical Assistant while unqualified, qualification is now necessary for the Assistant House Physician. He must be a registered medical practitioner by the beginning of his appointment.

The duties are to be allotted as follows:—

A.H.P.—A.

The Senior Physician	2 beds.
His corresponding Assistant Physician	1 bed.
Physician for Psychological Medicine	1 bed.
Nephritis Clinic	1 bed.

A.H.P.—B.

The Second Senior Physician	2 beds.
His corresponding Assistant Physician	1 bed.
Clinical Research Unit	1 bed.
Nephritis Clinic	1 bed.

A.H.P.—C.

The Third Senior Physician	2 beds.
His corresponding Assistant Physician	1 bed.
The Physician for Diseases of the Nervous System	2 beds.

A.H.P.—D.

The Junior Physician	2 beds.
His corresponding Assistant Physician	1 bed.
Physician for Psychological Medicine	1 bed.
Nephritis Clinic	1 bed.

A.H.P.—E.

The two Senior Physicians	each 1 bed.
The Fifth Assistant Physician	1 bed.
Clinical Research Unit	2 beds.

A.H.P.—F.

The two Junior Physicians	each 1 bed.
Physician for Diseases of the Nervous System	2 beds.
Nephritis Clinic	1 bed.

Those of the Assistant House Physicians (for the sake of simplicity in writing we shall omit the latter half of their dignified designation) who are attached to Assistant Physicians (and it will be seen from the above list that these are five) will be required to attend the Out-Patients' Department and "examine, investigate and prepare" the cases for their corresponding Assistant Physician. Otherwise the standing orders are not materially different from those obtaining under the former system. The standing orders for Clinical Assistants stated that "they are under the supervision of a House Physician who is to be informed of cases of urgency, and the Clinical Assistants must not take upon themselves the treatment of such cases," and the standing orders for Assistant House Physicians contain the same phrase. This phrase has been in the past interpreted with considerable latitude; whether the interpretation will be continued under the new system will, it seems, depend on the House Physician on whom the responsibility for the case ultimately devolves. The import of this is that the Assistant House Physician, although qualified, is not ultimately responsible for the cases under his care; this responsibility still rests with the House Physician.

There is no information yet obtainable as to whether aspiring Assistant House Physicians should apply specifically for any one of the jobs available; it will be seen that the scope of these varies considerably. There is also some ambiguity regarding the mechanism of the "take-in"—whether the Assistant House Physician admits cases only to his own beds or to those of his colleagues as well remains obscure.

Apart from mere questions of ambiguity there are several obvious drawbacks. Firstly, whereas hitherto Clinical Assistants have had the advantage of systematic teaching continued over a period by the same Physician on a level suited to their requirements, the Assistant House Physicians cannot have more than sporadic teaching from the Physicians to whom they are attached, presumably

in the course of ordinary ward rounds directed to the more elementary needs of the Ward Clerks. Secondly, the total number of cases in charge of the Assistant House Physicians is thirty instead of the Clinical Assistants' thirty-eight, and their wide distribution throughout the general medical wards will render their consistent study far more difficult. Whereas formerly there were thirty-eight cases in adjacent wards on which teaching was carried out almost daily, these advantages will now be lost.

Thirdly, whereas Clinical Assistants had, under optimal conditions, thirty-eight beds available for their "take-in," Assistant House Physicians can have, at best, only seventeen, or less than half, since under the present orders they can only take in into the beds of the general physicians to whom they are attached.

Fourthly, although it is proposed that the Assistant House Physicians should retain the sitting-room allotted to their predecessors, it will be realised that the close co-operation and comradeship with which the appointment of "Clinical" has always been associated, must with this scattered distribution of cases be lost to a great extent.

Finally, we would point out, and it amazes us that no provision has been made for this, that by the existing arrangements those taking the final examinations of the Royal Colleges (and these form by far the greater part of aspiring house officers) will not, owing to the dates of the examinations, be available as qualified men for the post of Assistant House Physician by the time that they are expected to take up their duties. They will, therefore, have to wait nearly three months before they can apply. It seems inevitable that there will be a rearrangement of dates to meet this point, but we would commiserate with those whom the authorities have placed this time in such an unfortunate position.

Against these drawbacks it may be observed that the post of Assistant House Physician, as compared with that of Clinical Assistant, carries two advantages. The first is that some opportunity is given for study of cases from the special departments, although, as we have pointed out, the Assistant House Physician will have no choice in the selection of these cases. The second advantage is that some contact will be maintained with the Out-Patient Department, since the Assistant House Physician will be required to attend his Assistant Physician's out-patients. We find it difficult to evaluate this last point, since the phraseology which deals with it in the standing orders is somewhat nebulous.

A third advantage cited by some, that the fact of having held an appointment of Assistant House Physician might sound more imposing a credential than having been merely a Clinical Assistant, from the point of view of application for posts outside, did not impress us.

To summarise, it appears to us, without having seen the scheme in operation, that the advantages of the new system to the Hospital are considerable; but to him who undertakes the appointment its disadvantages far outweigh its benefits. Our hopes that the value of the post of Clinical Assistant might be continued in the new appointment of Assistant House Physician have been to a large extent destroyed.

This leads us to the further question of how far the appointment is worth while? It has always seemed to us that the position of Clinical Assistant carried with it too great a financial burden, and we have often been surprised that there have been so many people found, in a proverbially impecunious race, who have the financial backing to undertake it. The new system places an even greater premium on financial stability, for not only has the student to wait until he is qualified before he can undertake his post, but under the regulations as they now stand he may, even after qualification, have to wait nearly six months before he can obtain an appointment in which his living expenses, apart from any further remuneration, are found. This difficulty could, it is true, be overcome by revoking the order by which Assistant House Physicians have to be qualified; indeed, it is difficult to see what differences exist between the old appointment and the new which have demanded the introduction of this new factor.

Even then there is the further stumbling-block that there are still to be six Assistant House Physicians, but that only four of these will continue to the ordinary house appointments; so that with the disadvantages of the new appointment and its possibly greater financial burden, there may, at the end of each term, be those who feel that they would have been better off elsewhere.

It appears that an increasing number of people may seek those posts obtainable in the provinces where there are provided a salary and board and lodging, and greater facilities for practical experience. One would expect that much valuable material might be lost to the Hospital in this way.

If the new system has had to be introduced, and that it is of general benefit to the Hospital may be agreed, we would wish that only four Assistant House Physicians were to be appointed and that the appointment might be done unqualified, if, indeed, it be worth retaining at all.

In the meantime we, like those aspiring to the new post, shall watch with interest the working of the system.

The Hand

Notes of a Lecture delivered at Leeds University on 16th February, 1937, by W. H. Ogilvie, Esq., M.Ch.

(The following remarks are the outline of a lecture delivered to the medical students at Leeds University on February 16th. The subject of hand infections has been dealt with in the "Gazette" by myself in 1930 and by Mr. Eckhoff two years ago. Since, however, the surgery of the hand is so important, and since my remarks deal with aspects somewhat different from those discussed in these previous papers, I have asked the Editor to accept my notes in place of a clinical lecture which I had promised him.—W. H. O.)

MOST medical books are read for information and not for pleasure. But there are a few of another kind which convey, not only facts and conclusions, but the enthusiasm that went to their discovery, and lend even to restatement a new significance. In such we study with delight and learn without effort.

High among the latter class I would unhesitatingly place Wood Jones' "Principles of Anatomy as Seen in the Hand." The prosaic title introduces a fairy story whose setting is as much in the realms of Physiology as of Anatomy. We see the human hand as no mere prehensile member or specially adapted forelimb, but an organ whose importance is that of a sixth sense—one whose retention of elemental simplicity has made the high fate of man possible, whose development has guided the evolution of the race, and whose full and perfect usefulness is necessary to the moral and intellectual welfare of the individual.

A man is very largely what his hand will allow him to become. The eye of the artist, the ear of the musician, the trained judgment of the doctor, can only find expression through the skill of the hand which carries out their commands. An injury to one finger may compel a man to change his profession. Absence of sensation over the median part of the hand will often prevent him from making any effective use of the muscular power which may remain almost unimpaired. The study of the functions of the hand in health and of the treatment of its disabilities is, therefore, one of the first importance.

The hand fulfils two main functions. It is a sensory organ by whose means we explore the size, shape, texture, weight and temperature of surrounding objects, and their relation to ourselves and to each other, and it is a grasping mechanism. The function of investigation is, as Wood Jones points out, almost peculiar to the hand of man—only shared, and to a lesser degree, by the higher apes. In other animals investigation is carried out by the sense of smell, and by the area supplied by the fifth cranial nerve.

A quadruped whose forelimb is stabilised and shod for running must use his snout to examine the texture and temperature of an object. He cannot therefore see and touch it at the same time. He cannot even see it as we see it, for binocular vision is impossible where a snout hinders convergence, and will remain undeveloped unless it is possible to rotate, advance and recess an object while it is being examined. The hand allows all these manœuvres and develops binocular vision and considered assessment; by freeing the jaws from many of the tasks of attack and food preparation, it allows a smaller snout, and convergent visual axes; it assumes all the tactile properties of the quadrupedal snout, with others that are made possible by fingers, such as the estimation of elasticity.

This highly specialised sensation is most particularly developed over the palmar aspects of the thumb, index and medius, that is, the area supplied by the median nerve. The median nerve is essentially the nerve of exploration, and where its sensation is lost, it is often quite difficult to persuade a patient to use the injured hand at all. A pathway connecting him with the outside world is cut off. The hand does not feel part of himself, and he is inclined to keep it covered and nurse it in a sling. The finer degrees of differentiation, such as that between the glass side and the sensitised side of a photographic plate, are almost impossible with the ulnar supplied fingers alone, and it requires a certain degree of conscious effort to interpret the sensations conveyed by these fingers. Loss of ulnar sensation does not seriously interfere with the use of the hand, and the chief disability that it brings is the liability to accidental cuts or burns on the insensitive area. Loss of radial sensation does not matter at all.

While loss of ulnar sensation is not a grave disability, a complete lesion of the ulnar is, perhaps, only less serious than one of the median, because of the importance of the ulnar intrinsics in all the finer movements. A hand with paralysed intrinsics—always provided that contractures have not occurred—is more useful than one with complete loss of median sensation, but it is only useful for rough kinds of work.

Two types of muscular action are employed in the hand—power, and accuracy or steadiness. Power is supplied by the long flexors of the fore-

arm, whose tendons only are found in the hand; accuracy and steadiness are subserved by the intrinsics. The intrinsics of the thumb oppose that digit to the other fingers. The lumbricals flex the metacarpo-phalangeal joints. The interossei extend the two terminal phalanges of the fingers. The extensors as a whole are not power

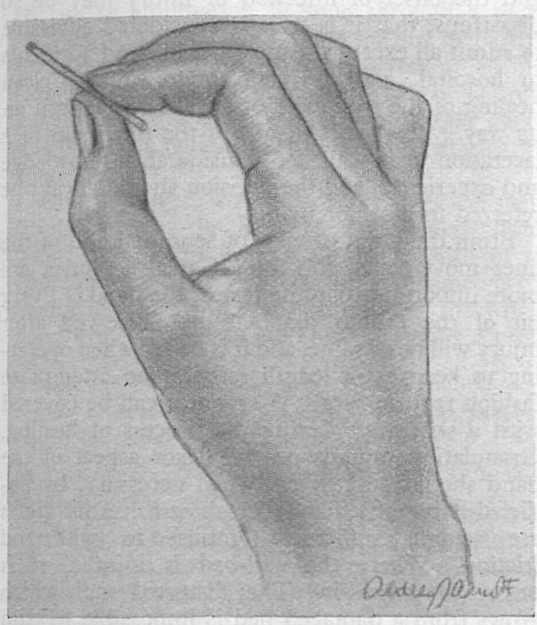


Fig. 1

muscles, but accessories. They are incapable of exerting any great force or of sustained contraction. Their action is the preparatory one of opening the hand for grasping. In each case we find a short muscle opposed by a long muscle whose belly is in the forearm—the thumb intrinsics by the thumb extensors, the lumbricals by the extensor communis digitorum, the interossei by the flexor sublimis and the flexor profundus. But, apart from their individual action, the intrinsics are used in all movements of the hand to steady the digits and allow the power supplied by the long flexors to be accurately directed to its point of application. The interphalangeal joints are hinge joints of considerable stability. The metacarpo-phalangeal joints are of the ball-and-socket type, and allow movement in all directions, but around them the intrinsics are set like shrouds along a mast, holding them steady in the desired position. On picking up a match between the finger and thumb, the first dorsal interosseous can always be felt to contract on the radial side of the first metacarpal aligning the index. When the intrinsics are numbed by exposure to cold, it is quite impossible to strike a match. Power is there, but steadiness has gone. The metacarpo-phalangeal joints have become "flail," and the finger tips cannot be accurately directed to apply the power.

As a grasping mechanism the hand employs a series of different grips, each of which is adapted for some special task. Any one of these may be imitated by an artificial hand, but the combination of different grips is beyond imitation. The two-finger grip, between the tips of the thumb and the Index (Fig. 1) is used for picking up small objects, and in fine work such as that of a watchmaker. The three-finger grip or "triangular grip of Vanghetti" (Fig. 2) is the grip used in holding a pen, pencil or brush. Here the object is held between the palmar aspect of the thumb, the ulnar side of the tip of the index, and the radial side of the tip of the medius. These two grips are only used in fine work, and the parts concerned receive their sensation entirely from the median. They depend more on steadiness than on power. The four-finger grip is used in handling a chisel or in holding a knife and fork (Fig. 3). Here the grip is taken by the ring finger, while the thumb, index and medius steady and direct the tool. To a worker who uses his hand chiefly as a four-finger grip machine the loss of the ring finger is a serious disability. In heavy manual labour, the whole hand is employed (Fig. 4). Here not the tip, but the whole palmar surface of the fingers is closed round a large object such as a rope, or the handle of a hammer or pick. In the whole-hand grip the thumb may not be employed unless the object grasped is a large one. The labourer's grip

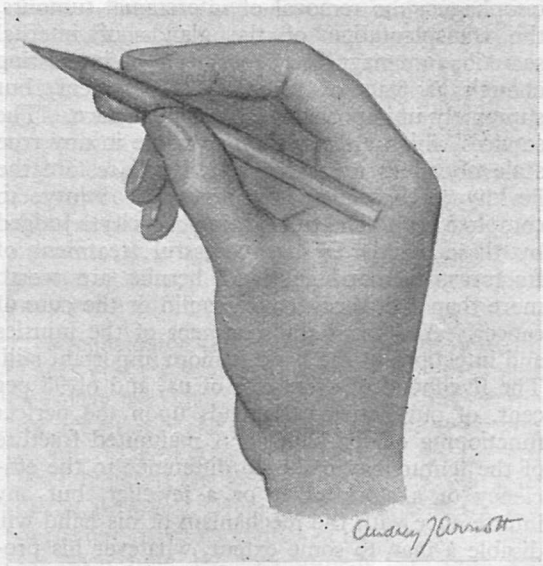


Fig. 2

employs power only, and is little interfered with by weakness of the intrinsics.

Fig. 3

Surgery means the work of the hand. Yet surgeons engrossed in other more dramatic, but not more important, aspects of their work have been neglectful, till quite recent times, of the member that gave them their name. The things we discuss and write about, resections of the œsophagus, the removal of intercranial tumours, the transplantation of the glands of internal secretion, are magnificent *tours de force*, interesting enough as feats of technical achievement, but supremely unimportant to the human race. The services which are most worth while in any true scale of values are those which will restore the healthy, incapacitated by illness or injury, to complete health and full earning capacity. Judged by these standards the successful treatment of fractures, hæmorrhoids and herniæ are worth more than the discovery of insulin or the cure of cancer. And the right treatment of the injuries and infections of the hand is more important still. The livelihood of every one of us, and of 95 per cent. of our patients, depends upon the perfect functioning of our hands. A malunited fracture of the femur may make no difference to the efficiency of a stockbroker or a jeweller, but any interference with the mechanism of his hand will disable a man to some extent, whatever his profession. Loss of the use of the right thumb is estimated a disability of 35 per cent., of the index 25 per cent., of the whole right hand 75 per cent., while of the whole upper limb is estimated at only 80 per cent., and of the lower limb 75 per cent.

Because we use our hands every day, they are every day exposed to injury—to blisters, cuts, pricks, abrasions or more severe lacerations. The correct treatment of hand accidents is so important, and the onset of infection or injury may be so disastrous, that it is usually considered advisable to admit all except the most trivial hand accidents to hospital, and to retain them till the clean healing of the wound or operation scar is well on its way. The exact details of the treatment of a laceration may call for considerable knowledge and experience, and the decision should always be referred to a senior man.

From the point of view of sensation and of the finer movements, the thumb and the index are more important than the rest of the hand. Every bit of the thumb that can be preserved after injury will be of value, and it is better when operating to keep extra length rather than attempt to fashion regular flaps. A raw area can be covered with a skin graft during the process of healing. Granulating wounds on the flexor aspect of the hand should be covered, when necessary, by pedicled flap grafts, for Thiersch or Reverdin grafts are seldom sufficiently robust to withstand friction. Where the nail-bed is injured, it is better to excise it. The distorted nail which grows from a damaged bed is impossible to trim or keep clean.

The two distal phalanges of the index, and indeed of all the digits, should be saved if possible,

Fig. 4

but if the proximal phalanx only remains the stump is of little value for fine work or sensation. Except in the labourer, it is better in such a case to remove the whole digit and the head of the corresponding metacarpal, as the gap is thereby made narrower, the hand is less unsightly, and the remaining fingers can be approximated. In the index amputation is done through a racket incision with a long handle, and the first metacarpal divided very obliquely three-quarters of an inch from its base. The thumb can then be approximated to the medius, and three people out of four will not notice that the hand is in any way abnormal.

It is, however, a mistake to remove the metacarpal head in the hand of a manual labourer. The resulting diminution in the breadth of the palm, and the division of the transverse metacarpal ligament, greatly weaken the force of the whole-hand grip. Even a single phalanx plays a useful part in gripping a heavy tool. On the other hand, with a labourer a stiff finger of full length is often so much in the way that it is advantageous to disarticulate at the metacarpo-phalangeal joint. Arthroplasties of the phalangeal joints are uniformly unsuccessful.

But we must remember that wounds of the hand may become septic, even when they are treated from the beginning under the best surgical conditions, and that minor injuries such as pricks are very prone to virulent sepsis, because they are often inflicted by dirty instruments and are too deep and narrow to overcome contamination by the natural process of pouring out a protective exudation on the surface. In the hand infection is particularly dangerous, because of the delicate mechanisms concerned, and because of the disastrous consequences of any loss in the perfect functioning of these mechanisms.

(*To be continued*)

Urological Impressions—Baltimore

By Ruscoe Clarke, F.R.C.S. (Leverhulme Travelling Research Fellow)

FIRST impressions are notoriously misleading. On reaching the States, therefore, I decided not to write any, and, if possible, not to form any. Here, then, are a few second impressions. Some of these may still be premature, but at least they are written after a sufficient interval to have allowed some of the sense of novelty to wear off.

I arrived in New York harbour in the middle of September. The thrill of the New York skyline was still there. I imagine it takes a long time to get immune to it. It still seems to me an incredible exaggeration of all the glimpses one has ever had of it in pictures, moving or still. After forty-eight hectic hours in New York I left for Baltimore by bus. I thought I should see more of the country that way. It wasn't much worth seeing until we got into Maryland. I arrived late in the evening, collapsed into the nearest hotel, and 'phoned "the Hopkins." I was lucky, and managed to contact Martin Harris, who is now "interning" there in pædiatrics. He showed me round, and I still do not know how much the informality of my introduction influenced me to feel that there is something about the Johns Hopkins Hospital that is redolent of Guy's. I have never felt that of any other American hospital. It has a Park; this is, perhaps, a little larger, but is all the same distinctly reminiscent of the Guy's Park. The Park is surrounded by "houses" in much the same way as the Park at Guy's is surrounded by the Surgical Block, the Massage School, the Nurses' Home, the Medical School, etc. These buildings all communicate by corridors on the main floor level and by subways. One of them is the "James Buchanan Brady Urological Institute," Hugh Young's famous clinic.

There are many rumours elaborating the story of the foundation of the Brady Institute. There is no doubt that Hugh Young removed "Diamond Jim's" prostate, I imagine by the perineal route. There is also no doubt that as a result the millionaire gave Young the Clinic. It was by Young's choice that the Clinic was incorporated with the Johns Hopkins Hospital. Brady himself took a great interest in the planning and construction of the building. I believe the stories of all the nurses being showered with diamonds are exaggerated; I am assured, however, that when Jim Brady first came to see Young, complaining of whatever prostatics do complain of, he was wearing diamond-studded gold buttons on his coat.

Whatever the truth of the origin of the Clinic, I was given a wonderful welcome by Dr. Young the next morning. I was not left alone until all the activities of the Clinic had been fully explained to me. Dr. Young has his office on the street level, which is one floor below the main floor level of the Hospital. Here are concentrated the whole of the out-patient activities of the Clinic. Patients are seen only by appointment. Private, semi-private and ward cases are studied with the same degree of thoroughness. Dr. Young's medical

staff consisted of Dr. Denny, his colleague, two "associate" or assistant surgeons, the "resident," two "assistant residents" and four "internes." Most of the routine laboratory work is done on the spot by these latter and by the staff of the special bacteriological laboratory on the top floor of the Clinic. In addition to the medical staff, a large secretarial staff is available. Almost everything Dr. Young says, particularly whilst examining patients, is taken down by a male stenographer. In addition to these elaborate records, Dr. Young never loses an opportunity to draw pictures. In his textbook, "Young's Practice of Urology," he makes what must appear to most English-trained medical men a remarkable statement—that one should always do rectal examinations with the left hand in order to be able to draw pictures with the right! He adheres to this precept, and the pictures are remarkably descriptive.

As an aid to the art of drawing pictures of physical signs, numerous charts are supplied. Separate charts are available for cystoscopy, urethroscopy, rectal, abdominal and other special examinations. They certainly help to make the records more than adequate. In addition to these artistic efforts a special room on this floor is devoted to the "Art Department." The larger teaching hospitals all possess such departments for the preparation of drawings, paintings and photographs of pathological specimens, operative detail, etc., but I know of no other general hospital which includes a department concerned only with the pictorial representation of urology. This is one of Dr. Young's hobbies and much of the expense is defrayed from his own pocket.

One of the first things that I was shown after meeting Dr. Young was a cinematographic demonstration of a new type of coloured film for use in a small movie camera. We were shown a film of a new operation for inguinal hernia. The operative technique illustrated had no particular significance, but the colour differentiation was far in advance of any I had previously seen. The operative field and detail were clearly defined, and the method obviously had real value. The same type of film was available for ordinary cameras, and the complete apparatus was acquired for the department in addition to a large number of coloured lantern slides of drawings and specimens. Some of these operative diagrams and other pictures are masterpieces of descriptive realism.

The rest of the office floor included a number of rooms for examination, all fitted with special cystoscopic tables. Two rooms are equipped with special cystoscopic X-ray tables. There is a small pathological and chemical laboratory and a special room for X-ray viewing. Stereoscopic pictures are used extensively, particularly in determining the relationship between a doubtful opacity and the renal pelvis or ureter as defined by opaque catheters and pyelography. A minor point in the technique of pyelography that is insisted upon in this Clinic is the use of burettes instead of syringes for introducing the opaque contrast media. This method no doubt introduces an added element of safety, but it is by no means universally practised even by Hopkins trained urologists.

I shall not, however, take up much time with the minutiæ of cystoscopic technique. These details vary so widely and can only be of interest to the specialist. There was much more of general interest. The direct cystoscopic application of radium is accomplished by means of an ingenious set of applicators. This is used in two groups of cases. After fulguration of apparently benign papillomata small doses are used to reach the base of the tumour in the endeavour to prevent recurrence. In more definitely malignant cases larger doses are applied to the centre of the growth and left in position for an hour at a time. Doses of 100 milligrams can be used for this purpose. The tables are sufficiently comfortable for this duration of irradiation not to be unduly irksome to the patient. The general feeling in this Clinic is opposed to the more radical treatment of vesical carcinomata. This is in striking contrast to the radical treatment advocated for carcinoma of the prostate and seminal tuberculosis.

Dr. Young's name is perhaps most widely known in connection with his persistent advocacy of the operation of perineal prostatectomy. One of the reasons for this persistence is that, in his opinion, this approach alone allows the carrying out of a radical operation for cancer, should this be present. Suprapubically a cure of cancer can be expected only if the growth is removed unnoticed in the depths of the co-existent hypertrophy. Where carcinoma is even suspected many regard an attempt at enucleation as inadadvisable. The perineal radical prostatectomy removes the whole prostate, seminal vesicles and part of the overlying bladder. Young claims to have produced a cure lasting more than five years in a number of cases of carcinoma that had already spread beyond the prostate itself. I did not see the radical operation for cancer, but was fortunate in being present when Dr. Lloyd Lewis completed the radical operation for tuberculosis. This is based on the theory that tuberculosis of the seminal tract is in most cases primary in the prostate and seminal vesicles. The operation aims at removing the prostate, seminal vesicles and vas deferens on one or both sides with any residual scrotal focus.

The operation is started in the perineum and the removal of the vas deferens completed with the epididymectomy or orchidectomy from the inguino-scrotal aspect. The particular case had already had a bilateral orchidectomy without any signs of the disease being arrested. He had continued to run a temperature and lose weight. The prostate and vesicles were extensively involved. The operation is rightly described as radical. To one unfamiliar with the operative anatomy of the perineum it seems quite incredible that normal micturition should ever be restored. Fortunately it generally is. I was fortunate when I saw my first perineal prostatectomy in having Dr. Lewis at my side to explain the stages. I almost blushed at my anatomical ignorance. I saw the recto-urethralis muscle for the first time, and the fascia of Denonvilliers exposed better than it usually is in the dissecting room. Much of the success of this operation depends on exposure. This is achieved firstly by the use of the exaggerated lithotomy position, and secondly by the use of a number of special retractors. The position is best obtained by the use of a special table which raises the patient's buttocks and simultaneously pushes down the shoulders. The most important part of the operation is the separation of the rectum. The enucleation of adenomata is carried out through a V-shaped incision in the prostatic capsule which preserves the integrity of the ejaculatory ducts. Suture is completed with a boomerang needle, perineal drainage established, and the skin closed with silk. Urethral catheter drainage is regarded as optional.

The first claim made for this operation when considering benign hypertrophy is that it is safe. Perineal surgery produces much less shock than abdominal section. Drainage is aided by gravity. Early movement is possible. The results in the hands of experts are good. The dangers of injuring the rectum or the external urethral sphincter must not be forgotten. It is obviously an operation requiring considerable familiarity with the male perineum.

The operative work is done almost invariably in the early morning, leaving the rest of the day free for ward visits, cystoscopies, clinics, discussions, etc. The wards are essentially small and, as in most American hospitals, a large number of private and semi-private wards are provided. Sick patients are isolated wherever possible. Most prostatics receive a period of preliminary drainage by indwelling catheters. The importance of renal function is stressed. The blood urea is determined at frequent intervals, and controlled by the phenosulphonepthalein excretion test. I was surprised at the widespread use of the " P.S.P." test, which is used in most American hospitals as a matter of routine where we would use the urea concentration or urea clearance tests. Dr. Young took a lot of trouble explaining the various advantages of the test and the importance of using the correct technique.

At the Brady Clinic, after forcing water to ensure a diuresis, 2 c.c. of the dye are injected intravenously. The test is best carried out with a catheter in place. The appearance time is noted and specimens are collected every half-hour for two hours. The amount of the dye present is determined by a very simple colorimetric method and a curve is drawn on another special chart. The normal should show a marked peak, up to 40 per cent. at the end of the first half-hour. Renal inefficiency is indicated by a shift of the peak, flattening of the curve, or delay in the appearance time. The determinations are done by the internes. The test can also be used easily to compare the functions of the two kidneys, and it can also be repeated at frequent intervals.

The objections raised to the urea concentration test are that the technique is more difficult and that it involves giving an added dose of urea to a patient who may already be on the brink of uræmia. This objection may well be valid, although I have never seen any harm result from the use of the test at Guy's.

Another chemical compound that is very popular at the Brady Clinic is mercurochrome. I suspect that a small element in this enthusiasm is due to the fact that it was discovered in the Clinic. Its use in the form of Scott's solution was routine pre-operative preparation. It is also used in septicæmia. The bacteriological cultures are done routinely on all patients with but a slight elevation of temperature. The result is interesting. A number of transient blood stream infections are discovered. The use of specific therapy in cases of this kind may easily be misleading. The results obtained in cases of severe gonorrhœa were more convincing.

The type of case most favoured for mercurochrome treatment is the case with systemic or joint involvement of some kind which is resistant to local therapy. Large doses are used intravenously. A severe reaction with fever up to 104 or 105 degrees Fahrenheit is aimed at. If necessary this may be repeated after about four days. A number of case charts of dramatic cures were unearthed for my perusal. Dr. Young is convinced that the renal lesions alleged to be due to the mercurial are no different from the lesions that one would expect to get in septicæmia and that the toxic effects are exaggerated. I was sceptical, but found Dr. Young's enthusiasm

sufficiently infectious to make me try it out on the next available opportunity.

The opportunity arose a few weeks later. The patient gave a history of three months' illness following a definite diplococcal anterior urethritis, and he had lately been confined to bed with severe joint infection. Other points suggested rupture of a prostatic abscess into the rectum. On admission he had a definite acute proctitis. Later proctoscopy confirmed the theory of the rupture into the rectum. His arthritis involved the left knee and both wrists. Rectal irrigations were begun and 34 c.c. of 1 per cent. mercurochrome given intravenously. A severe reaction followed. The temperature reached 105°. He was nauseated and very distressed. A trace of albumen appeared in the urine on the next examination and he developed a severe ulcerative gingivitis. The therapy was discontinued, and he gradually recovered after requiring two perineal incisions for drainage of pus that had tracked from the prostate. I still am sufficiently infected with Dr. Young's enthusiasm to try again. That infectiousness is characteristic of the personality of the chief of the Brady Clinic.

I intended to avoid discussing the question of trans-urethral resection of the prostate. Dr. Young was one of the first to use a "punch" on certain types of prostatic obstruction, but he has never advocated the extensive use of the modern instruments. I was, therefore, surprised to see his "resident" using the McCarthy high frequency resectoscope. Now that I know a little more of the positions of the house staff in American hospitals I am not surprised. The resident's appointment is essentially a senior one. He may not have to "live in." In most cases the operations on patients on the public wards are done by the resident or someone junior, unless a member of the full staff is particularly interested in the case. At Young's Clinic the resident has probably been doing house appointments for the past ten years. The associate surgeons at first do considerably less operating than they would have done as residents. By contrast, the students in most American hospitals have very little chance to assist at operations.

The last morning of my brief stay in Baltimore started with operations at 8 a.m. After a nephrolithotomy the exposed kidney was X-rayed with the portable machine to prove that the removal of stones was complete. This is a routine procedure. One of the reasons for this is that an occasional lawsuit has been successful in proving negligence against a surgeon who has left stones behind. A film is always impressive in court!

After this operation I was kidnapped by Dr. Lloyd Lewis, who explained to me the technique and recent results of cystometry. This is now an established method of measuring bladder function. It is helping to clear up many of the difficulties in the physiology and pathology of the intricate mechanism of micturition.

I tried then to say *au revoir* to Dr. Young, but it was difficult to get away. He was discussing the most recent simultaneous bilateral approach to the adrenals in cases of suspected cortical tumours. Two operators expose the two adrenals separately on the two sides. After inspection, the indicated procedure is completed with less difficulty than by the anterior route. The advantage of the direct exposure of the glands is obvious if one has seen the death of a patient after unilateral adrenalectomy from acute suprarenal failure. In a recent case at Guy's, laparotomy had revealed the tumour on the one side, but not the absence of the gland on the other.

I did at last catch my train after making many promises to return to this remarkable Clinic for a longer visit. I shall certainly do so.

Travel

LAST year, with the co-operation of the Municipality of Frankfurt and the Auslandstelle of the University, the National Union of Students arranged a very successful medical vacation course in Frankfurt for doctors and students of the St. Thomas's Hospital. The tour was carried out under the leadership of Dr. Stephen Taylor, who wrote an account of it in the October number of the *St. Thomas's Hospital Gazette* (see page 460).

It has been suggested that the course should be repeated in the summer of 1937, and that members from Guy's and St. Bartholomew's Hospitals should be asked to take part in it.

The cost of the tour from London back to London was last year £14 8*s*. 0*d*. This allowed for 2nd class travel on the Continent and also included an allowance for the leader's expenses, who thus had a free trip. The cost this year would be approximately the same.

Further information can be had from the *Gazette* Office.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

List of Periodicals

TAKEN IN THE WILLS LIBRARY AND THE VARIOUS DEPARTMENTAL LIBRARIES, TOGETHER WITH A GUIDE AS TO WHERE THEY CAN BE FOUND.

THIS list is a revision of that which appeared in the *Gazette* of 3rd August, 1935, and it is hoped to revise it from time to time so that the list may be kept up to date. Every attempt has been made to collect together the complete list of periodicals actually housed in the Departmental Libraries, whether current or stopped. As far as the Wills Library is concerned, only the journals which are received currently are noted.

Journals which are still being taken regularly are noted by bold type.

The following abbreviations have been used to denote the various Departments :—

Anat. Anatomy Department.
Bact. Bacteriological Department.
Chem. Chemistry Department.
Dent. Dental Department.
Hunt. Hunt Memorial Library (Cardiological Department).
Path. Pathological Department.
Phar. Pharmacological Department.
Phys. Physiological Department.
W. L. Wills Library.

Acta Medica Scandinavica.
W. L. Vol. 53, 1920—

Adelaide Hospital. Medical and Scientific Archives.
W. L. Vol. 4, 1925—

American Chemical Society, Journal.
Chem. 1920—

American Dental Association, Journal.
Dent. Vol. 18, 1931—
W. L. Current Copy.

American Heart Journal.
Hunt. Vol. 1, 1925—

American Journal of Anatomy.
Anat. Vol. 1, 1901—

American Journal of Cancer.
Path. Vol. 25, 1935—

American Journal of Medical Sciences.
W. L. Vol. 1, 1828—

American Journal of Pathology.
Path. Vol. 1, 1925—

American Journal of Physiology.
Phys. Vol. 1, 1898—Vol. 47, 1918.
Vol. 90, 1934—

American Review of Tuberculosis.
Path. Vol. 31, 1935—

Anatomical Record.
Anat. Vol. 1, 1906—

American Medical Association, Journal.
W. L. Vol. 59, 1912—

Annales de l'Institut Pasteur.
Bact. Vol. 1, 1887—

Annals of Surgery.
W. L. Vol. 25, 1897—

Annual Reviews of Biochemistry.
Path. Vol. 1, 1932—

Archiv fur Anatomie.
Anat. 1877—1903.

Archives f. Experimental Pathology u. Pharmacy.
Path. Vol. 58, 1908—Vol. 101, 1924.

Archiv fur Pathologische Anatomie, etc. (Virchow).
W. L. Vol. 13, 1858—

Archives des Maladies du Cœur.
Hunt. Vol. 1, 1908—

Archives of Disease in Childhood.
W. L. Vol. 1, 1926—

Archives of Internal Medicine.
W. L. Vol. 23, 1919—

Archives of Medical Hydrology.
W. L. Vol. 3, 1925—

Archives of Pathology.
Path. Vol. 11, 1931—

Association of American Physicians, Transactions.
W. L. Vol. 1, 1886—

Australian Journal of Experimental Biology and Medical Science.
W. L. Vol. 1, 1924.

Australian and New Zealand Journal of Surgery.
W. L. Vol. 1, 1931—

Biochemical Journal.
Chem. Vol. 1, 1906—
Phys. Vol. 1, 1906—

Biological Abstracts.
Bact. Vol. 1, 1927—

Birmingham Medical Review.
W. L. 1879—1917.
1935—

Brain.
W. L. Vol. 1, 1878—

Bristol Medico-Chirurgical Journal.
W. L. Vol. 9, 1891—

British Chemical Abstracts.
Chem. **A. Pure Chemistry,** and **B. Applied Chemistry.** 1926—

British Dental Journal.
Dent. Vol. 56, 1931—
W. L. Vol. 10, 1889—

British Journal of Experimental Biology.
Path. Vol. 1, 1920—

British Journal of Surgery.
W. L. Vol. 1, 1913—

British Journal of Venereal Disease.
W. L. Vol. 1, 1925—

British Medical Journal.
W. L. 1853—

Bulletin de l'Institut Pasteur.
Bact. & Path. Vol. 13, 1915—

Bulletin of Hygiene.
Path. Vol. 11, 1936—

Canadian Medical Association Journal.
W. L. Vol. 16, 1926—

Centralblatt fur Bacteriologie.
Bact. Originale, Vol. 7, 1890—Referate, Vol. 31, 1902—2nd Abt., Vol. 43, 1915—

Chemical Abstracts.
Chem. 1920—

Chemical Society of London.
Chem. **Abstracts and Transactions,** 1871—1925.
Journal, 1871—

Clinical Journal.
W. L. Vol. 1, 1892—

Clinical Science.
W. L. Vol. 1, 1933-34—

Current Researches in Anæsthesia and Analgesia.
W. L. Vol. 9, 1930—

Dental Cosmos.
Dent. Vol. 74, 1932—
W. L. Vol. 40, 1898—

Dental Index Bureau. Index of Dental Literature. Compiled by Arthur D. Black.
W. L. 1911—1929.

Dental Record.
Dent. Vol. 53, 1933—
W. L. Vol. 19, 1899—

Deutsches Chemisches Gesellschaft, Berichte.
Chem. 1895-96—

Dublin Journal of Medical Science (continued as Irish Journal of Medical Science).
W. L. 1842—1921.

Du Bois Raymond's Archiv de Physiologie.
Phys. 1866—1908.

Embryology, Contributions to.
Anat. Number 1 (A few numbers missing).

Ergebnisse der Algemeinen Pathologie und Pathologischen Anatomie.
Path. Vol. 1, 1896—Vol. 29, 1935.

Ergebnisse der Inneren Medezin und Kinderheilkunde.
W. L. Vol. 1, 1908—

Ergebnisse der Physiologie.
Phys. Vol. 1, 1902—Vol. 23, 1923.

Faraday Society. Transactions.
Chem. 1934—

Glasgow Medical Journal.
W. L. Vol. 1, 1868—

Guy's Hospital Gazette.
W. L. Vol. 1, 1872—

Guy's Hospital Reports.
W. L. Vol. 1, 1836—

Handbuch der Physiologie.
Phys. Vol. 1, —Vol. 6, 1881.

Heart (continued as Clinical Science).
Hunt. Vol. 1, 1909—Vol. 16, 1932.

Index Medicus (continued as Quarterly Cumulative Index to Current Medical Literature).
W. L. 1888—1927.

Indian Journal of Medical Research.
W. L. Vol. 1, 1914—

Indian Medical Record.
W. L. Vol. 54, 1934—

Indian Medical Research Memoirs.
W. L. Vol. 1, 1924—

International Journal of Orthodontia.
Dent. 1933—

Irish Journal of Medical Science (continuation of Dublin Journal of Medical Science).
W. L. Vol. 1, 5th ser., 1922—

Jahrsbericht der Physiologie.
Phys. Vol. 1, 1872—Vol. 20, 1891.
N.s. Vol. 1, 1892—Vol. 15, 1906.

Japanese Journal of Medical Sciences.
W. L. Vol. 1, 1927—

Johns Hopkins Hospital, Bulletin.
W. L. Vol. 1, 1889—

Journal d. Physiologie et Pathologie Gen.
Path. Vol. 16, 1913—

Journal of Anatomy (continuation of Journal of Anatomy and Physiology).
W. L. Vol. 51, 1917—
Anat. Vol. 53, 1919—

Journal of Anatomy and Physiology.
W. L. 1867—1916.

Journal of Bacteriology.
Bact. Vol. 1, 1916—

Journal of Biological Chemistry.
W. L. Vol. 103, 1933—
Phys. Vol. 1, 1905—Vol. 102, 1933.

Journal of Cancer Research.
Path. Vol. 1, 1916—Vol. 5, 1920.

Journal of Clinical Investigation.
W. L. Vol. 1, 1924—

Journal of Comparative Neurology.
Anat. Vol. 32—Vol. 36.

Journal of Dental Research.
Dent. 1933—

Journal of Experimental Medicine.
Path. Vol. 17, 1913—
W. L. Vol. 58, 1933—

Journal of General Physiology.
Path. Vol. 19, 1935—

Journal of Hygiene.
Bact. Vol. 33, 1933—

Journal of Immunology.
Path. Vol. 26, 1936—

Journal of Infectious Diseases.
Path. Vol. 12, 1913—

Journal of Laryngology and Otology.
W. L. Vol. 46, 1931—

Journal of Medical Research.
Path. Vol. 27, 1912—Vol. 44, 1924.

Journal of Morphology.
Anat. Vol. 34—Vol. 38.

Journal of Obstetrics and Gynæcology of the British Empire.
W. L. Vol. 9, 1906—Vol. 25, 1914.
Vol. 39, 1932—

Journal of Pathology and Bacteriology.
Path & Bact. Vol. 1, 1892-1893—

Journal of Physiology.
W. L. & Phys. Vol. 1, 1878—

Journal of the Microscopical Society.
Phys. Vol. 1, —Vol. 13, 1893.

Journal of Pharmacology and Experimental Therapeutics.
Phar.

Journal of Scientific Instruments.
Bact. Vol. 2, 1923-24—

Journal of the Society of Chemical Industry.
Chem. 1917—

Kitasato Archives of Experimental Medicine.
W. L. Vol. 11, 1918—

Klinische Wochenschrift.
W. L. Vol. 9, 1930—

Lancet.
W. L. 1823—

Liverpool Medico-Chirurgical Journal.
W. L. Vol. 1, 1881—

Long Island Medical Journal (continued as Medical Times and Long Island Medical Journal).
W. L. Vol. 1, 1907—Vol. 24, 1930.

Mayo Clinic. Collected Papers.
W. L. 1905—

Medical Annual.
W. L. 1883—

Medical Research Council. Special Report Series.
W. L. 1916—

Medical Society of London. Transactions.
W. L. Vol. 1., n.s. 1846—

Medical Times & Long Island Medical Journal (continuation of Long Island Medical Journal).
W. L. Vol. 59, 1931—

Medicine.
W. L. Vol. 5, 1926—

Medical Journal of Australia.
W. L. 1914—

Medical Officer.
W. L. 1909—

Nature.
W. L. Vol. 105, 1920—

Neurological Institute, Bulletin.
W. L. Vol. 1, 1931—

New Zealand Medical Journal.
W. L. Vol. 1, 1900—

Odontologie.
W. L. Vol. 59, 1921—

Pfluger's Archiv.
Phys. Vol. 1—Vol. 126, 1909.

Pharmaceutical Journal.
W. L. Vol. 1, 1841—Vol. 87, 1912.
Vol. 132, 1934—

Physiological Abstracts.
Phys. Vol. 1, 1916—
W. L. Vol. 4, 1919—

Physiological Reviews.
Phys. Vol. 1, 1921—

Policlinico.
W. L. Vol. 41, 1934—

Practitioner.
W. L. Vol. 1, 1868—

Prescriber.
W. L. Vol. 24, 1930—

Quarterly Cumulative Index to Current Medical Literature (continuation of Index Medicus).
W. L. Vol. 1, 1927—

Quarterly Journal of Medicine.
W. L. Vol. 1, 1906—

Revue Medicale de Nancy (continuation of Revue Medicale de l'Est).
W. L. Vol. 48, 1920—Vol. 63, 1935.
Vol. 64, 1936—

Revue Pathologie Comparée.
Bact. 1912.

Rockefeller Institute. Reports.
Phys. Vol. 1, 1904—

Royal Army Medical Corps, Journal.
W. L. Vol. 1, 1903—

Royal Naval Medical Service, Journal.
W. L. Vol. 1, 1915—

Royal Society. Proceedings.
Chem. A. Mathematical and Physical Sciences.
B. Biological Abstracts.

Royal Society of Arts.
Chem. 1919—

Royal Society of Edinburgh. Proceedings.
W. L. Vol. 22, 1899-1901—

Royal Society of Edinburgh. Transactions.
W. L. Vol. 39, 1898-1899—

Royal Society of Medicine. Proceedings.
Dent. Vol. 25 1931—
W. L. Vol. 1, 1907—

Saint Bartholomew's Hospital Reports.
W. L. Vol. 1, 1865—

Saint Thomas's Hospital Reports.
W. L. Vol. 1, 1870—

Societatis Pathologicæ Japonicæ. Transactions.
W. L. Vol. 23, 1933—

Société Anatomique de Paris. Bulletins.
Anat. 1879—1912.

Société des Chirurgiens de Paris.
W. L. Vol. 19, 1927—

Société Chimique de France, Bulletin.
Chem. 1921—

Société Medicale des Hospitaux de Paris.
W. L. Vol. 1, 1884—

Society of Experimental Biology and Medicine. Proceedings.
Path. 1936—

South African Journal of Medical Sciences.
W. L. Vol. 1, 1936—

Surgery, Gynæcology and Obstetrics.
W. L. Vol. 18, 1914—

Tropical Diseases Bulletin.
Path. Vol. 1, 1912—Vol. 25, 1925.

Ulster Medical Journal.
W. L. Vol. 1, 1932—

West London Medical Journal.
W. L. Vol. 3, 1898—Vol. 21, 1916.
Vol. 38, 1933—

Zeitschrift fur Hygiene und Infektionskrankheiten.
W. L. Vol. 48, 1904—

Zeitschrift fur Morphologie und Anthropologie.
Anat. Vol. 1—Vol. 11.

Zeitschrift fur Physiologische Chemie.
Phys. Vol. 1, 1887—Vol. 91, 1914.

T. J. E.

Correspondence

Colostomy

To the Editor of the GAZETTE

SIR,—I enclose (with his permission) a letter I received from our Senior Consulting Surgeon. I feel sure many of your readers will be interested in this evidence of Mr. Golding-Bird's continued critical interest in the *Gazette*.

Yours, etc.,

E. G. SLESINGER.

14, Devonshire Place,
Wimpole Street, W.1.

Dear Mr. Slesinger,

Though a stranger to you I write after reading your lecture in the *Gazette* on Colostomy. But my name may not have quite died out at Guy's, and that is my introduction to you.

I note you use the glass rod to retain a spur; but did you ever try what I did *with complete success*, the spur being permanent and preventing fæces getting into the lower part of the bowel? It is to make the skin incision an obtuse angle, point downwards, and, instead of a glass tube, forceps is pushed through the mesentery; the obtuse "tip" is seized and pulled through and sewn to the skin below. Thus a permanent living bridge is created, preventing the skin retracting. Further, when healed, the bowel opening is thus surrounded by a ring of elastic skin—a kind of elastic sphincter. Where I got the idea from I don't remember, but I was the only Guy's surgeon to adopt it.

My earliest colostomy was just sixty years ago, —the old lumbar variety.

Pardon my intrusion, also my writing, which is from my bed; I am in my 89th year.

Believe me, sincerely yours,

C. H. GOLDING-BIRD.

Pitfield,
Meopham, Kent.

(Mr. Golding-Bird's writing was exceedingly clear. We are grateful for his interest, and assure him that his name has not died out at Guy's—*Ed.*)

Heat

To the Editor of the GAZETTE

SIR,—My excuse for writing to the *Gazette* is that, recently, two papers have appeared in its pages, "Heat Exhaustion and Dehydration in the Arabian Desert," by Lt.-Col. Stott, M.D., F.R.C.P., and "Animal Heat," by J. A. L. Leeming, Esq.

Col. Stott's experience was most dramatic; he and his companions were exceedingly lucky to escape with their lives from that very warm corner, or quarter, of incandescent Arabia. It is eloquent, if unappreciated, testimony to the "air-keeping" qualities of the "giant planes" of Imperial Airways that almost no provision is made, in the way of extra food, water, ice, etc., carried in the machine for the exigencies of a forced landing. Col. Stott managed the slender resources of his party with great skill and forethought, and they can count themselves lucky in having had such an able and experienced medical man with them in a time of such need.

In Mr. Leeming's valuable paper reference is made to an old article of mine—unfortunately, not always correctly. He writes, "Marsh and Aldo Castellani claim that sunstroke is due to ultra-violet rays, and claim that the rarity of the condition among pigmented races is in support of this." As a matter of fact, both Sir Aldo Castellani and I were very strongly in favour of the theory that sunstroke is *not* due to the invisible rays at the blue end of the spectrum, and there is now general agreement on this point among workers on the subject.

In another place Mr. Leeming writes: "Heat-stroke and sunstroke in the lay mind are always closely connected. In actual fact the best workers on this subject differentiate sharply between them." There is now general agreement that heatstroke and sunstroke are the same condition, preferably termed "hyperthermia" to avoid the use of "hyperpyrexia," which has such very strong associations with microbic disease. These are, however, small imperfections which in no way detract from the general excellence of Mr. Leeming's paper. If he is sufficiently interested in the subject to read further into it, there is a longish paper, with numerous references in the fourth volume of "The British Encyclopædia of Medical Practice," edited by Sir Humphry Rolleston and published by Messrs. Butterworth.

I was interested in his statement that an Indian coolie, working hard, can sweat 10 per cent. of his body weight, or twice his blood volume, a day without any ill effects. This feat is almost equalled by the European labourers working on Boulder Dam in California, who commonly drank eighteen litres of water a day, according to the American medical man who had charge of them.

This subject (heatstroke and the syndrome of heat effects) seems to have excited scientific curiosity in, and exact observation from, medical and other men, since very early times, for it is recorded in "Josephus" that at the siege of Jotapat by Vespasian, "The men hanging on the crosses . . . the army doctors . . . selected particularly vigorous and particularly feeble prisoners for observation, and demonstrated that the mid-summer heat contributed very greatly to hasten the lethal process."

Even the phenomena of dehydration have been described by the laity; in "'Smara,' the Forbidden City," by Michel Vieuchange, who writes, ". . . and her light illumined the side of the courtyard where we lay. Unsuccessfully I tried to sleep. I remembered that in Paris, when I was in a similar condition, I used to drink one or two glasses of water, and grow drowsy in perspiration." It is singular that very few people have described the mental changes undergone by men in an environment of great heat; they are quite characteristic, and are very similar to the psychological reactions described by Sir Joseph Barcroft in "Lessons from High Altitudes" among men at Cerro in the Andes.

Yours, etc.,

FRANK MARCH.

Pathological Laboratory,
c/o Anglo-Iranian Oil Co., Ltd.,
Masjid-i-Sulieman,
South Iran.

Lament for the Debating Society

To the Editor of the GAZETTE

SIR,—In these days when a demand for at least two front-page headlines each day has been created in the public by the popular press, one does not have to be a cricketer or even interested in the game to be well aware of the momentous struggles between England and Australia in the Test Matches.

The fate of the "Ashes" has a news value equal to that of the latest week-end coup of a dictator or ill-timed gaffe of a primate.

And what, might one ask, are these Ashes? Simply the perpetuation of an old joke whereby an urn was presented to the winners of a Test Match, in which I gather England had fared astonishingly badly, purporting to contain the "Ashes"—sole remaining token of deceased English cricket.

So far from being moribund, let alone deceased, was the object of this gibe that now the interest in Test Matches is greater than ever before.

It is the hope that a similar tonic effect may follow an obituary that prompts me to bewail the death of the Debating Society.

I clamour for its burial because I yearn to see its revival.

Last year it was virtually defunct, while this winter has passed without a single meeting—although Heaven knows life has provided us with a sufficiency of controversial themes.

It is absolutely inexcusable to allow this drift of affairs to continue. The Hospital, as we know to our cost, is crammed with students, and each new term ushers in another fifty cohorts or so of freshmen, all eager to plunge into whatever social activities are open to them at the Hospital.

First among these should be the Debating Society. It need lack neither support nor fresh blood; all that is necessary is to propose some motion for debate, find two heroes prepared to kindle the fierce flames of dissension, ply all and sundry with beer and enjoy the ensuing mêlée.

It is up to the officers of the Society—whoever they be at present—to reveal what repressions have laid them so low recently. If they need help they must get it—anything to improve a state of mental stagnation among all of us in our leisure moments, wherein the only dissentient voices raised in the Spit are those of prospective lunchers arguing as to the rival merits of "sausage-and-fried" or "egg-on-Welch."

Professor Pembrey, who was to Guy's what the oracle was to Delphi, always stressed the importance of debate among students, and was himself a keen debater.

It was partly to encourage the technique of logical assertion that he founded the Physiological Society, but, admirable as this Society is, it must needs confine itself to physiological matters, while its discussions provide no outlet for views, however diverting, which bear but scant relationship to the subject of the paper.

The qualities needed for debate on general subjects, however, are just those which debating naturally develops; among them quick wits, the power to grasp the essential points of an argument, and the ability to hear, with equal sureness and serenity, one's own views endorsed or ridiculed, are vital to a doctor and desirable in any man.

Anyway, spiced with humour and leavened with beer, the whole thing is grand fun.

So, Secretary of the Debating Society, we look towards you—can we hope to catch your eye?

Yours, etc.,

D. STAFFORD-CLARK.

Guy's Hospital,
S.E.1.

The Left Book Club

To the Editor of the GAZETTE

SIR,—The Left Book Club was started in May, 1936, by Victor Gollancz, the publisher, with the object of enabling people interested in progressive social and political ideas to buy books on the subject more cheaply. Every person joining the Club receives the Club's choice of the month at 2*s*. 6*d*., *i.e*., he undertakes to buy one book a month at 2*s*. 6*d*. There is no other obligation or cost. In addition they publish additional books which you may buy at the same reduced rate if you choose, *e.g*., Noel Baker's "The Private Manufacture of Armaments" was published at 4*s*. 6*d*. instead of 18*s*.

So far the series of Left books published has included many very interesting books, *e.g*., Stephen Spender's "Forward from Liberalism" and John Strachey's "Theory and Practice of Socialism," as well as books on the contemporary situation in France, Spain, Italy and Germany. The membership of the Club has grown to 40,000, and groups for the discussion of the books and of present-day social and political problems have been formed all over the country. A very successful rally of the members was held in the Albert Hall on 7th February. I could not get to it, because all tickets were sold out within a month. The meeting was reported by Cummings in the *News-Chronicle*, and even in the wireless News Bulletin.

In addition to the book of the month, members receive a monthly news-sheet keeping them informed of the Club's activities, the books chosen, etc.

I feel there must be people among the Hospital staff and students interested in this movement who would like to join the Club, and perhaps come to the meetings of our South London group. Membership of the groups is entirely voluntary. Various meetings take place at the Laurie Hall, Deptford High Street. Membership may be registered with Victor Gollancz, Ltd., 14, Henrietta Street, Covent Garden, London, W.C.2.

Yours, etc.,

A. E. RISSIK.

77, Drummond Road,
S.E.16.

Sport

Rugby

Guy's v. Devonport Services

GUY'S visited Devonport on Saturday, February 6th, and were defeated by 3 placed goals, a penalty goal and 3 tries (27 points) to nil.

It was a pity that the Hospital, with seven reserves in the fifteen, were unable to field a more representative side, as the Services were at full strength and played their best game of the season. No doubt the long journey told upon the Hospital, especially after the interval, when the Services dominated the play to such an extent that Knapman, the full-back, was able to move up to make an extra three-quarter.

It was a glorious afternoon, and, although the ground was heavy, the sun shone warmly and there was plenty of good open play.

Guy's controlled the early scrummages, but, although Crawford and Birks showed plenty of enterprise, smart tackling by the Services kept them in check, and the first dangerous movement came from the Services.

Using the touch-line to advantage, Knapman put the Services on the attack, and good work by Webb in the line-out kept Guy's in their own territory.

Hargreaves at fly-half was in brilliant form, and the Services nearly took the lead when he cut through and punted ahead.

Davies followed up smartly, and Plowman was forced to carry over his line, but from the resulting scrum Guy's cleared. Within a quarter of an hour, however, the Services were in front; again it was Hargreaves who made the opening, and this time when he was tackled Evans snapped up the ball and went over for a try, which Knapman converted.

Guy's were still having the better of the scrummages, but could make little progress against the sound marking, and the Services went further ahead when, after a great run by Casement,

Hurden took a perfect pass and scored an unconverted try.

Five minutes after the interval, Kark was pulled up for obstruction and Knapman kicked a penalty goal.

From then onwards the Services were complete masters and they threw the ball about at every opportunity. Further tries were scored by Casement (2), Hurden and Davies, two of which Knapman converted.

Team.—R. D. Plowman; A. B. Baxter, P. H. Birks, R. D. Allen, J. L. G. Hartley; J. P. Crawford, D. I. Chapman; M. R. Kark, E. S. Nicholson, H. H. Crabb, J. R. D. Williams, D. P. Finnegan, G. P. A. Sechiari, A. J. Drew, C. F. Ziervogel.

Guy's v. Royal Air Force

ON Wednesday, February 10th, the Royal Air Force visited Honor Oak Park and, after an even first half, easily defeated the Hospital by 3 placed goals, a penalty goal and a try (21 points) to nil.

Both sides were practically at full strength, but notable absentees were Van Steytler from Guy's and Malcolmson, the Irish full-back, from the Air Force. However, Pratt, another Irish International who deputised, gave such a polished display, both in fielding and kicking, that it is doubtful whether Malcolmson could have improved upon it.

For the first quarter of an hour the exchanges were even, both sides attacking in turn, and play was transferred from one end of the field to the other with amazing rapidity. On one occasion a nice kick by Dick found touch near the corner and Crawford was nearly over, but Pratt saved well and cleared.

A nice movement between Cross and Kemp on the left wing looked dangerous for Guy's, but a forward pass only a yard from the line enabled the Hospital to clear their lines after two or three hard scrums.

The Air Force forwards were very fast and ever ready to pounce on any mistakes; for several minutes they gave Guy's a harassing time, and when they were awarded a penalty for kicking the ball out of the scrum a score appeared certain, but Roncoroni sliced his kick.

The ground was very heavy, but this did not affect the standard of play, which at times was brilliant. Walker at stand-off half combined admirably with Shepley, who was far too quick for Lewis.

Guy's eventually got away through Crawford and Dick, but Pratt fielded a long kick ahead and found touch. However, after another combined effort between the same players Baxter only just failed when the latter was hurled into touch near the corner flag.

The Air Force retaliated with the forwards and backs supporting each other in a splendid passing movement, but Walker got offside just as he was about to take the final pass.

Two minutes from half-time the Air Force were awarded a penalty for offside, and Roncoroni kicked a fine goal from thirty yards out.

The second half was started at a terrific pace, and every inch of ground was hotly contested by both sets of forwards. Following pressure in the Hospital's 25, Dick and Stewart broke through, but Cross and Rogers were deadly in their tackling and allowed little progress to be made. Walker was playing a splendid game for the Air Force, and a movement initiated by him nearly led to a score when Halford kicked over the line, but Halamandres got back just in time and touched down.

Soon after this, Guy's suffered a blow when Hartley was kicked in the back when going down to a forward rush, and had to leave the field. During his absence Stewart, in trying to clear from his 25, kicked the ball into Halford's hands, who, being unopposed, ran in behind the posts for Roncoroni to kick a goal.

Hartley returned to the field, but had to retire altogether after a few minutes, and from then onwards the Hospital had to defend desperately.

A poor pass from Dick to Stewart went astray, and in a flash the Air Force forwards were up and Halford dribbled on to score behind the posts, and Roncoroni kicked an easy goal.

The same player scored another try a minute later, and then Gascoigne finished off a snappy movement with a try, which Roncoroni converted.

Guy's were now a well-beaten side, and, although they made several attempts to break through, nothing would go right. The final blow came when Halford intercepted a pass from Stewart to Walt (who had gone on the wing) and Gascoigne was up to score an easy try.

Team.—C. Halamandres; A. B. Baxter, R. C. S. Dick, I. McD. Stewart, J. L. G. Hartley; J. P. Crawford, W. J. Lewis; M. R. Kark, E. S. Nicholson, H. H. Crabbe, J. R. D. Williams, A. Forbes, F. Walt, I. G. Robin, E. C. Sharp.

Guy's v. Old Leysians

AT Wandsworth Common on Saturday, February 13th, Guy's defeated the Old Boys by a placed goal and 2 tries (11 points) to nil.

With the exception of A. Forbes, Guy's fielded the "A" team pack and included J. van A. Steytler, who had just returned from South Africa.

Dick and Steytler had a particularly good game, and were always menacing when they had the ball, and the forwards, who had to borrow a player from the touch-line, played together well and were equal to their opponents both in the scrums and the loose.

However, the Leysians proved themselves a lively force in the early part of the match, and had they been able to round off their loose rushes the score might have been different.

Outside the scrum the Hospital held a decided advantage, and with Lewis and Crawford combining well the threes had many opportunities, and took full measure of an indifferent defence.

The Old Boys did most of the attacking at the start, but failed to penetrate a sound defence. Gradually Guy's began to get on top, and before the interval Dick snapped up a dropped Old Leysian pass and ran through to score between the posts. Dick took the kick and converted.

After the interval the exchanges were fairly even, but Guy's soon increased their lead when Birks finished off an excellent bout of passing by scoring near the corner flag. Following this reverse, the Old Boys attacked, and their forwards tried hard to sweep the Hospital off their feet, but Guy's withstood the onslaught and eventually Dick rounded off another great movement by scoring another try, which was not converted.

Team.—C. Halamandres; P. H. Birks, R. C. S. Dick (Capt.), J. van A. Steytler, A. B. Baxter; J. P. Crawford, W. J. Lewis; P. H. Crampton, D. F. Burnford, D. P. Finnegan, A. Forbes, P. Ellis, C. L. McClintock, C. F. Ziervogel, A. N. Other.

Guy's v. Old Millhillians

ON their own ground, the Old Millhillians defeated the Hospital on Saturday, February 20th, by a placed goal and 3 tries (14 points) to a placed goal and a try (8 points).

With the Hospital Cup-ties in view, the Old Boys agreed to play forty minutes each way, and, after winning the toss, took advantage of a strong wind which blew straight down-field.

Spong and Wiggins, as agile as ever, soon appreciated the situation, and with well-judged kicks to touch compelled Guy's to defend their 25 for several minutes. Darke, Forbes and Robin tried hard to get the ball out of the danger zone, but the Old Boys never spared themselves and tackled so relentlessly that Guy's made little or no progress.

A scrum infringement nearly led to a penalty goal, but Lackie missed by the narrowest of margins, and a little later Spong made a fine attempt to drop a goal.

At this stage the Old Boys were doing all the attacking, and it came as no surprise when Wiggins deceived at least three Hospital defenders before sending Collinson in for an unconverted try.

Still pressing hard, the Old Millhillians gained another try when Hall charged down a kick from a drop out, gathered and ran through for a try, which Lackie converted.

After this Guy's began to assert themselves; their forwards had been very lethargic up till now, and a fine combined effort nearly led to a score.

A little later Dick made a splendid run of thirty yards, before Tippett and Lapthorne succeeded in bringing him down.

Guy's stuck to their task, and another raid brought good results, when Darke ran in for an unconverted try. After having the worst of the exchanges, Guy's surprised their opponents, when Baxter from his own 25 made a brilliant run to midfield and Dick, coming up at top speed, took a perfect pass and, after a forty-yards' run, completed a splendid movement with a try behind the posts to which he added the goal points.

With the scores level, play became fast and furious. For some time Guy's kept their opponents at bay, but near half-time Wiggins, Tippett and Collinson participated in a bout of passing which ended in the latter crossing the line for an unconverted try.

After the interval, Guy's improved, and an attack in which Crawford, Birks, Darke and Walt were conspicuous broke down only a yard from the line.

Several similar attempts to get through were frustrated, and in a counter-attack Steytler tried to check a storming raid by the Old Boys' pack, but received a leg injury and had to retire. He returned after a quarter of an hour, but he was obviously feeling the effects of his injury, and was unable to do himself justice.

With good kicks to touch Crawford and Dick kept play in the Millhillians' territory, and after some excellent moves Darke and Williams were held up on the line and Baxter was thrown into touch a yard from the corner flag.

In the last minute, the Old Boys broke away and Ridge, accepting a pass from Wiggins, managed to scramble over for the final try.

Team.—C. Halamandres; P. H. Birks, J. van A. Steytler, R. C. S. Dick (Capt.), A. B. Baxter; J. P. Crawford, W. J. Lewis; M. R. Kark, E. S. Nicholson, H. H. Crabb, J. R. D. Williams, A. Forbes, C. S. Darke, I. G. Robin, F. Walt.

Inter-Hospitals Cup—Second Round
Guy's v. Charing Cross

GUY'S passed into the Semi-Final of the Hospitals' Cup when they defeated Charing Cross at Richmond on Thursday, February 25th, by 2 placed goals and 2 tries (16 points) to a placed goal and a try (8 points).

The usual ground was in such a bad state that the match had to be played on the pitch at the back of the grand stand. This, too, became little better than a quagmire before the game had been in progress long, as the first half was fought out in heavy rain and a biting wind made the conditions as bad as they could be.

Long before the finish the players were so plastered with mud that it was difficult to differentiate friend from foe. However, both sides put up a magnificent fight and the enthusiasm was intense.

With the wind in their favour, Guy's quickly took a ten points lead, when first of all Allen scored a copy-book try which Kark converted. Following a quick heel, Lewis whipped out the ball to Crawford, who broke through and sent a nice pass to Allen, who left the full-back helpless.

A little later Crawford took a difficult pass on the blind side and passed to Baxter; the latter ran determinedly and, after beating three men, scored a try which Kark converted.

Although Guy's continued their efforts to keep the game open, the conditions were hopeless, and the match developed into a hard battle between the forwards. After Ingram and Guest had dribbled a dropped pass some distance, A. Brown tried to land a penalty goal. A little later W. J. Lewis picked up and broke away, but he waited for Walt to come up to him before passing and an opportunity went astray. Charing Cross then surprised Guy's when Wilson kicked over the line, but, although he missed the touch-down, a minute later Ingram kicked over the line and Brown hurled himself on the ball for a try, which he converted with a good kick.

With only five points' difference at half-time, anything might have happened, and Charing Cross were unlucky when the wind suddenly veered right round so that they had it in their faces again.

Guy's attacked from the restart, and tried to score by every means, but it was Charing Cross who achieved success after driving them off. Their forwards, led by Brown, swept down the field and, following up a kick ahead, Guest aroused tremendous enthusiasm when he emerged from a crowd of players after registering a try. Brown's kick looked a certain goal till a gust of wind checked the ball as it was sailing between the posts.

The rest of the game was filled with rousing forward work, and each hard-fought yard was accompanied by frenzied supporters.

Then the Guy's pack took charge. By wheeling towards the touch-line they steered the ball to safety, and eventually stormed the Charing Cross line, time after time. The Hospital kept Charing Cross penned on their line, but they held out until the Guy's pack pushed them over twice in quick succession, to score tries which no one could claim as his own.

Team.—C. Halamandres; A. B. Baxter, P. H. Birks, R. D. Allen, D. H. Douglas; J. P. Crawford, W. J. Lewis; M. R. Kark, E. S. Nicholson, H. H. Crabb, J. R. D. Williams, A. Forbes, F. Walt, I. G. Robin, C. S. Darke (Capt.).

Association
Guy's v. Christ's College (Cambridge)

AT Cambridge, on January 30th, Guy's defeated Christ's College by 3 goals to 1.

For the first ten minutes Christ's did the major part of the attacking, and the Guy's defence had to work hard. Gradually the play became more even, and Guy's put the ball in the net, but the point was judged offside. Soon after this Christ's scored through their inside right with a shot which gave Stanyon-Jacques no chance.

Play remained even, but about ten minutes before half-time Harvey dribbled through the Christ's defence and scored a nice goal to put Guy's level. Half-time arrived with no addition to the score.

After the interval Guy's gradually took command of the game, but were unable to score for some time. At length, Guy's took the lead through Lee, who scored following a passing movement started in the Guy's penalty area and continued up the left side of the field. Guy's continued to attack after this, and the Christ's goalkeeper saved several shots which appeared to be certain scorers. However, towards the end of the game Harvey again dribbled through the Christ's defence and scored to give Guy's a lead of two goals.

The game ended with no further scoring and with Guy's attacking strongly.

Team.—K. A. Stanyon-Jacques; F. K. Johnson, B. M. Heap; W. D. B. Maile, G. M. Pearson, H. A. Lee; J. Jones, R. W. Harvey, J. R. L. Goldman, V. D. Lewes, G. C. Sprigings.

Guy's v. Bart.'s

IN the first round of the Inter-Hospitals Senior Cup at Honor Oak Park on February 4th, Guy's were rather unfortunate to be defeated by Bart.'s by 4 goals to 3 after having had a large part of the game.

Bart.'s made several strong attacks at the beginning of the game, and after ten minutes they scored what appeared to be an offside goal following a free kick just outside the Guy's penalty area. Guy's played harder after this, but it was Bart.'s who scored next.

Play became more even, and R. W. Harvey beat the Bart.'s defence to score a fine goal for Guy's.

Guy's attacked strongly after this, and only spectacular play by the Bart.'s goalkeeper prevented their scoring again.

Just before half-time the Bart.'s inside right got possession of the ball on the penalty line and gave Stanyon-Jacques no chance with a fine shot. Half-time came with Bart.'s leading by three goals to one.

After the interval Guy's began to attack strongly, and were unlucky not to score on one or two occasions. After pressure on the right, Harvey centred the ball to Dorr, who headed in to reduce Bart.'s lead.

Guy's continued to press, but from a clearance the Bart.'s inside right again received the ball near the penalty line. The Guy's defence were slow in tackling, and he was able to score a fourth goal for Bart.'s. Play then became more even, but about ten minutes from the end Dorr again scored for Guy's. This encouraged Guy's, and they again attacked strongly, and were unlucky not to score, many shots just passing outside the goal or being stopped by the Bart.'s goalkeeper, who was one of the major causes of the Guy's downfall.

However, the game ended with Bart.'s leading by four goals to three, which was rather unlucky for the Guy's team, who had played hard throughout.

Team.—K. A. Stanyon-Jacques; N. L. McNeil, B. M. Heap; F. K. Johnson, G. M. Pearson, H. A. Lee; E. Harvey, R. W. Harvey, G. W. Dorr, V. D. Lewes, G. C. Sprigings.

Guy's v. Old Bradfieldians

GUY'S defeated the old Bradfieldians by 3 goals to 2 at Honor Oak Park on Saturday, March 6th.

The game began with several strong attacks on the Guy's goal, but, after a time, Guy's rallied and had more of the play. After about fifteen minutes, from an attack on the Guy's goal the ball was passed up the left side of the field and went to Sprigings, who scored from about ten yards out. Guy's attacked more strongly after this, and ten minutes later, after some scrambling play in the Old Boys' penalty area, Sprigings scored a second goal from a centre by E. Harvey.

A period of even play followed, but about ten minutes before half-time Rees centred the ball from the left wing and R. W. Harvey headed in to give Guy's a lead of three clear goals. However, this lead was reduced just before half-time when the Old Boys' outside right scored a similar goal, the Guy's defence misjudging the flight of the ball.

After the interval, Guy's continued to attack, but could not score, the forwards tending to dribble too much near the goal.

After twenty minutes the Old Bradfieldians' outside right again scored, the Guy's defence again being at fault in thinking that the ball would pass over the goal-line. The Old Boys attacked more strongly after this goal, but were unable to penetrate the Guy's defence.

No further scoring took place, and so Guy's ran out winners by three goals to two.

Team.—D. A. Clough; D. A. Priestley, B. M. Heap; N. L. McNeil, G. M. Pearson, H. A. Lee; E. Harvey, R. W. Harvey, G. C. Sprigings, G. G. Rees, E. W. Wright.

Ice Hockey

Guy's v. Barclays Bank

GUY'S beat Barclays Bank by 9 goals to 4 at Harringay. The game was well contested, and not until the end of the second period did Guy's take a deciding lead.

From the face-off Hancock scored quickly for Guy's, but Barclays quickly equalised. After several minutes of play Praat beat Barclays goalie with a shot from the blue line, and shortly afterwards drew the defence to pass to Simms, who scored from close in. Barclays closed the scoring with a nice individual run by their left defence.

Beginning the second period, Barclays began an all-attack game and kept Guy's hemmed in their own defence zone with Watson in goal casting aside numerous shots. After about five minutes Barclays scored. With the score even Barclays still played a full attack, and their lack of back checking gave Guy's an opening. Lee got away with the pack and scored with a hard shot from left wing. In quick succession Simms broke through twice and scored two goals.

In the third period Guy's clinched the game. Barclays scored early, but the Hospital defence broke up all subsequent attacks, and, with clever passing, Praat, Ross and Simms each scored. The

final score was : Guy's, 9 goals ; Barclays Bank, 4 goals.

Team.—Goal : Watson ; Defence : Bromley, Cushing, Tichurst. Forwards : Ross, Hancock, Lee, Simms, Praat, Hall.

Cross-Country Running

ON Wednesday, March 3rd, over the United Hospitals' five-mile course at Coulsdon, the inter-hospitals' race for the "Kent Hughes" Cup was decided.

This resulted in Guy's retaining the Cup, which was regained last season after a lapse of ten years. The scores were :—

1. Guy's—32 points.
2. St. Thomas's—47 points.
3. London—56 points.

The surprise of the race was the defeat of A. C. Franks (St. Thomas's) by A. E. J. Etheridge (Guy's), the holder. Franks has been one of the most outstanding runners in the South of England this season and had defeated Etheridge on every occasion. The latter, however, has just struck form, and is now training for the national championship. He certainly has an excellent chance of being the first hospital runner to become an international.

This is his fourth successive win in the hospitals' race. This has only been beaten by H. A. Munro (Guy's), who won on five successive occasions—1893-97. Dr. Munro was present judging the race.

Despite the fact that G. W. Taylor, E. J. F. Hinde and D. J. Lyon, who finished fourth, fifth and sixth last year, were unable to reproduce that form owing to illness, the younger members of the team filled the breach very ably. C. E. Shadland ran well up to his improved form in finishing fourth.

The effect of their first season of hard racing proved valuable to P. A. Dodington, J. R. Stanley and P. N. Swift, who ran very well together to finish eighth, tenth and eleventh respectively.

J. Henry, the secretary of the Boat Club, ran very well with them, to finish ninth and also to win the handicap run in conjunction with the race.

The start was exceptionally fast, Franks going into the lead and attempting to shake off Etheridge. The latter, however, managed to keep within twenty yards of him, and at the half distance, where there is very heavy plough, made his effort, opening up a gap of fifty yards in the next half-mile. Franks had been tired by his early efforts and never got on terms again.

Thus Etheridge won without much difficulty by one minute in 33 minutes 30 seconds. This is over two minutes faster than his winning time last year.

The superior stamina of the Guy's team enabled them to keep up the pace, despite the fast start. This had, however, told on the other hospital teams, who had not trained throughout the season.

Cricket Club

THE Annual General Meeting was held on Friday, the 19th of February, in Classroom III. The Minutes of the previous meeting having been read by the Secretary, it was proposed, and unanimously carried, that the President, Professor T. B. Johnston, and Vice-Presidents, Messrs. A. Bulleid and T. B. Layton, be re-elected for 1937.

The following officers were then elected for the forthcoming season :—

Captain.—L. G. Morey.
Vice-Captain.—J. A. L. Leeming.
Hon. Secretary and Treasurer.—P. H. Birks.
Captain and Secretary of Second Eleven.—A. M. Platt.

It was then proposed that the Committee, which formerly consisted of the President, Captain, Vice-Captain, Secretary and six other members, be reduced in number, and it was decided that the Committee be represented by the officers for the ensuing season and two other members, one of whom was to represent the interests of first- and second-year students.

G. O'Gorman was proposed and elected for this purpose, and C. L. T. McClintock was elected the other member.

The meeting then adjourned with a vote of thanks to the President for kindly consenting to take the Chair.

Rifle Club

Staff v. Students

ON Friday, February 19th, at the Hospital miniature rifle range at Mark Brown's Wharf, the Students entertained the Staff and challenged them to a shooting match; conditions of the shoot were 10 rounds at 25 yards. The Staff team and scores were :—

N. L. Eckhoff (President of the Rifle Club)	95
W. H. Ogilvie	93
J. S. Batchelor	88
E. H. Rink	88
I. G. Robin	79
J. H. E. Winston	—
J. Meckelburg	98
R. Brooke	88
R. S. Bruce-Pearson	71
Total	700

The Students' team and scores were :—

G. E. Barnard	100
N. S. Harris	99
E. Allen	98
R. Matthews	98
J. H. Capon	95
F. R. Russell	92
A. E. Baxter	92
A. M. Pollard	80
Total	754

The members of the two teams who shot early in the evening indulged in a very exciting game of darts, the Students starting early, but the Staff won a thrilling game, when Dr. Bruce-Pearson brought down the House with a perfect " double-three."

The party then adjourned to the Bridge House Hotel, where the Students were entertained to an informal, but very enjoyable, supper.

A spoon was presented to the member of the Staff making the highest score. This was won by Mr. Eckhoff with a score of 95 out of 100.

This was the first of what is hoped will be regular annual fixtures between Students and Staff, as is the annual match at Bisley.

All students (expert or novice) who wish to shoot are invited to come along to the Miniature Range, which is open every Friday evening from 5.30 p.m. until about 8.30 p.m.

The Range is in Potters Fields, on the left-hand side of Tooley Street from London Bridge, and about 20 yards from Tower Bridge Road.

E. ALLEN,
Hon. Sec.,
Guy's Hospital M.R.C.

Hospital Information, etc.

Notice

WE are, as all good Guy's men know, in the final of the Inter-Hospitals Rugby Football Cup. We shall meet St. Mary's at Richmond on Wednesday, March 24th, when the match is timed to start at 2.45 p.m. Tickets can be obtained through the Medical School Office, or through Mr. Nicholson, the Secretary of the Club at the modest price of four shillings. Applications must be made not later than Saturday, March 20th.

Pass List

ROYAL COLLEGE OF SURGEONS.
L.D.S.
FINAL EXAMINATION.
February-March, 1937.

PART I.—Surgery.

W. B. J. Baskin
D. W. Bugg
A. J. Clegg
D. W. Harvey
K. J. L. Hollington
E. A. Moore
V. Rattee
N. L. Rowe
B. Seton
H. B. Shay
J. E. C. Thorpe
J. F. van de S. de Villiers
W. H. West

PART II—Dental Surgery.

G. M. A. Brown
A. J. Clegg
F. B. Gamblen
J. L. Harrington
G. W. Lawrence
F. McCombie
N. A. McCormick
E. A. Moore
W. R. G. Morris
B. W. P. Roberts
N. L. Rowe
V. S. Sams
E. C. Sharp
H. B. Shay
J. E. Tudor
W. K. Weighell

UNIVERSITY OF OXFORD.
February, 1937.

The Degree of Doctor of Medicine has been conferred on
W. H. Owles.

SOCIETY OF APOTHECARIES OF LONDON.
FINAL EXAMINATION.
February, 1937.

Surgery.
B. A. R. Pitt.
Midwifery.
J. D. Buckner
W. A. Groom

Papers by Guy's Men

Arthur F. Hurst. Carcinoma of the stomach, with an account of Anglo-Dutch investigation into its pathogenesis. *Nederl. Tijdschrift voor Genceskunde*, 1937, *Jaargang* 81, No. 4, 23 January, Higmans van den Bergh Jubilee Number.

Arthur F. Hurst. Gastritis. *Clin. Jour.*, 1937, lxvi, 89.

E. W. Goodall. Fracastor as an Epidemiologist. *Proc. Roy. Soc. Med.*, 1937, xxx, 341.

R. Brooke. Bone-shortening for inequality of length in the lower limbs. *Proc. Roy. Soc. Med.*, 1937, xxx, 441 (Sect. Orthop.).

L. Forman. (1) Erythema multiforme type of pemphigus; (2) Superficial ulcerating tuberculosis of the skin. *Ibid.*, 369 (Sect. Dermat.).

T. Izod Bennett. Medical treatment of non-malignant pyloric stenosis in adults. *Lancet*, 1937, i, 552.

Changes of Address

H. J. Spon, Park Gate, Blackham, Witham, Sussex.

A. Ruscoe Clarke, F.R.C.S., The Peter Brent Brigham Hospital, 721, Huntington Avenue, Boston, Mass.

Birth

PAYNE.—On January 28th, 1937, to Zoë, wife of R. Vaughan Payne, M.Ch., F.R.C.S., of Windsor—a daughter.

JARMAN.—On March 3rd, 1936, at 79, New Cavendish Street, W.1, to Mary, wife of Dr. Ronald Jarman—a son.

EDS. { A.G.W.H. / H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

GUY'S Hospital is in one sense a part of the University of London, and in that sense we would hasten to congratulate the University authorities on their wisdom in electing Mr. H. L. Eason, C.B., C.M.G., M.D., M.S., F.R.C.S., as Principal of the University, in succession to the late Sir Edwin Deller, and to rejoice with other constituents of the University at their good fortune in being able to look forward to an era of well-ordered efficiency, which, we feel sure, Mr. Eason will bring to them.

However, in a much more personal sense, we bitterly regret this appointment. The Hospital will lose its Superintendent, and surely one of the wisest counsellors it has ever had, and a gap will be left that, for the moment, seems impossible to fill.

Mr. Eason joined the Staff of the Hospital in 1905 as an ophthalmic surgeon, and, as well as his work in the Eye Ward, he has held most of the administrative posts that are available, being Dean of the Medical and Dental Schools and Warden of the College. In 1920 he became Medical Superintendent, and in this capacity many of us have come to regard him as something of an institution. As someone quite inseparable from the Hospital, and one who had all the intricacies and problems of our narrow little world at his finger-tips. This is not intended to be a formal appreciation of Mr. Eason's work for the Hospital; for that we hope to publish at a later date and from somebody far better suited to speak than ourselves, but he will be missed by all, from the highest to the lowest, for he seemed to have a grasp of every detail of the Hospital, and whether it was a question of quietening disgruntled relatives or a problem of internal administration, his knowledge of the relevant facts seemed astounding and his influence always immense.

Mr. Eason retired from the active Staff in 1933, but he has seemed hardly the less busy for doing so, and has continued his many interests outside the Hospital, chief of which, perhaps, has been his connection with London University, of which he became the Vice-Chancellor in 1935. Now, as Principal, he will, we understand, move from Guy's, and the University's undoubted gain is unfortunately our loss.

With very great respect, we would congratulate Mr. Eason on this honourable appointment, and take some consolation from the fact that at least he will remain a member of the consulting staff.

IT has been said that the Hospital is famous, not so much on account of the few who spend their lives working here, but rather because of the reputations of the many who leave us to work elsewhere. That may or may not be true, and it is, in any case, a statement that we are quite unqualified to comment upon, but it is unfortunately impossible to put all the ablest of Guy's men on the Staff, and we sometimes feel that but a meagre interest is displayed in the work of some who have migrated to other fields. However, we would hasten to extend our warmest congratulations to Mr. D. W. C. Northfield, M.S., F.R.C.S., who has recently been appointed to the post of Assistant Surgeon to the Department of Neurological Surgery at the London Hospital.

Mr. Northfield had a very distinguished career at the Hospital, and, having qualified as a dental surgeon in 1923, and having won most of the prizes offered to students, including the Treasurer's Medals both for Medicine and for Surgery, he proceeded to obtain higher qualifications with astonishing rapidity and ease, and became a Surgical Registrar in 1928, soon after he had been elected a Fellow of the College of Surgeons. He held this post until 1932, when he became a Demonstrator of Anatomy, his last appointment before

taking up the Arthur Durham Travelling Scholarship which he was awarded in December, 1933.

Ever since he resigned from the post of Demonstrator in Anatomy here in December, 1933, Mr. Northfield has been engaged upon the neurological aspect of surgery and for one year acted as house surgeon to Mr. Cairns at the London Hospital. This, quite obviously, was a very unusual step to take, and one which required considerable moral courage, for, though to anybody interested in this particular subject, such a House appointment must be of untold value, and we feel sure that Residents at the London Hospital live in luxury as yet undreamed of here, yet we doubt whether there are many who, having attained Mr. Northfield's academic distinction, would consider returning to the College as a mere Resident. In winter to huddle again before the all-too-gentle glow of the gas-fire and endure the monotony of Potage St. Cloud and Creme Parmentiere, not to mention that eternal cod.

After his period as house surgeon was over, Mr. Northfield became chief Clinical Assistant to the Department of Neurological Surgery at the London Hospital, and was recently awarded the Will Edmunds Scholarship, and in 1936 became a Hunterian Professor at the Royal College of Surgeons, so that now his latest distinction comes as a crowning achievement after four years of successful work, and it only remains for us to assure him of our sincerest admiration.

LAST week's newspapers were full of information about the Hospital, and no doubt many of our readers noticed that Professor G. Payling Wright has announced his engagement to Miss Goddard, whom, we understand, is a physiologist. Any union between the various branches of medicine is highly desirable, and we feel that an amalgamation of pathologist with physiologist should provide an ideal background to a happy married life. We congratulate them both most heartily and wish them every happiness.

MOST of us have been inside a police station once and have seen those fascinating notices giving particulars regarding persons with whom the police desire a closer acquaintance, but it is rarely that they are to be seen around the Hospital, and we studied the one posted in the Front Surgery the other day with more than passing interest. True, this one was only written in ink, but its warning seemed none the less dramatic, for apparently some local malefactor had been disturbed while doing a little modest pilfering, and, since he left the building hurriedly by a first-floor window, it was thought that he might possibly attend the Surgery for damage to his ribs. Why this particular injury was suspected we were not told, though it is conceivable that the unfortunate man might have sustained a compression fracture in this region, due to an attempt at too rapid moulding of his chest, had he dived through one of the constricted casements from which we peer daily at the passing world. However, the rumour that he was seen jumping from the College with an armful of overcoats is, apparently, without foundation.

WE awoke the other morning to find that the pigeons are no longer undisputed tenants of Hunt's Tower. Someone has been up to the top of it, and a series of ladders, perched precariously against the brickwork, remain to mark his path, and have caused considerable speculation as to the object of this brave, though not entirely original, expedition. Has some passing patient, like Jacob of old, been received among the clouds, or has the gentleman, who has left his tie up there these many years, at last returned to reclaim it, or is it merely that the chimney has been smoking? Frankly we do not know, and we have seen no sign of life in this region as yet, but if the speed of the workmen approaches anywhere near that of those employed on the roof of the College not so long ago, those ladders should be in position for several years yet, and there will be ample time to examine the whole situation.

ACCORDING to the Sunday papers, somebody has succeeded in breeding a red, white and blue goldfish in a village in Bedfordshire, and intends to exhibit this attractive novelty on the village green on the day of the Coronation. We congratulate this pioneer on the success of this experiment, and the production of a unique patriotic mascot, but we understand that some dissatisfaction, coupled with a certain amount of jealousy, has been felt among the baboons in the London Zoo.

EROS is, we learn, to be boarded over for ten days during the Coronation celebrations, and, as many of our readers will remember, this is precisely what happened to the statue of Thomas Guy in the Front Quadrangle during the war. However, it is doubtful whether the unveiling of Eros, when all is over, will be anything like so spectacular as the scene which occurred when Thomas Guy was first released from his wooden casing, though anyone contemplating a first-class breach of the peace could hardly do better than to imitate that example.

WE much regret an error in our last number. The signature to a letter on "Heat" from South Iran should read "Frank Marsh" instead of "Frank March," as was printed.

A Series of Three Lectures on Clinical Problems

By T. B. Layton, Esq., D.S.O., M.S.

I.—THE ESSENTIAL LINE OF CLEAVAGE

GENTLEMEN,—By derivation the word "Clinical" means bedside; but in a wider sense it means dealing with the patient. You will be faced with problems of clinical medicine when he is up and about. Among such occasions is that when you will have a large number of patients to see in a limited time. In a general hospital such as Guy's you are in this position in the department that we call the Front Surgery. After this, I believe that the Ear and Throat Out-Patient Department affords the best opportunity during your student career of becoming acquainted with this type of work. The problem before you on these occasions is to sort out those patients in whom there are lesions that may be serious and demand immediate action, from those which are not of a serious nature or of a type in which action may be delayed for a time. I call this the essential line of cleavage in Clinical Medicine.

Let us take first the young man of eighteen who says he has had pain in his ear for two or three days with discharge for twenty-four hours. On looking in the ear you see a white pultaceous mass from which there is exuding some discharge of an indeterminate character. Such of the meatal wall as you can see is red and very tender. The essential line of cleavage here is between a lesion limited to the outer ear on the one hand and an inflammation of the middle ear cleft on the other. The former may be very painful and distressing to the patient. It may be very difficult for you to cure. It may tend to recur from time to time, but it is not serious and never will be from the doctor's point of view. The other includes a series of lesions the slightest of which contains the potentialities of the gravest disorder. Let me impress upon you the importance of the essential line of cleavage by explaining what I mean by "serious from the doctor's point of view" and by taking these inflammations of the Middle Ear Cleft as a text. An acute otitis media is not in itself a serious matter. The drum-head ruptures, the discharge escapes, at the end of four days the condition is well on the way to recovery. It is a condition that tends to a cure. It may not be so painful, nor make the patient so ill, nor be nearly so difficult to get well as a boil in the meatus. But the number of times in which a boil will spread seriously to surrounding tissues is so few that a person of special experience may only meet with one in his professional career; while the spread of an inflammation of the middle ear cleft to surrounding tissues so as to endanger life will occur in everyone's practice from time to time; and if the lesion does not get completely well it may leave behind a condition that may long lie dormant and then suddenly—perhaps after forty years—slay the patient within forty-eight hours. This is why every acute inflammation of the middle ear cleft is "serious from the doctor's point of view," and the lesion of the meatus is not. The fact that the serious complication, though common in my branch of work, may only occur occasionally in the practice of any given doctor makes it all the more important that he should recognise the essential line of cleavage between these two groups of lesions.

Let us now take another clinical problem in which the essential line of cleavage is to split off one particular lesion from all the other possible conditions. It is a question of making an immediate provisional diagnosis. It is not the accuracy of diagnosis that is important: it is the rapidity. It is not that an error is made that matters. The essential time of cleavage depends upon the error being made in one direction and not in the other. If the error is made in one direction no harm is done, but if made in the other and appropriate action is deferred, the patient's life may be lost, and certainly has been endangered by the delay.

It is the case of the man, woman, or child who comes to you complaining of some pain in the throat in which you see something white on the tonsillar or pharyngeal mucous membrane. The vital lesion is diphtheria. The essential line of cleavage lies between this and everything else.

The other causes of the lesion may be just as severe, the patient may be just as seriously ill, he may go through an illness which entails as much skill and care on your part to get him through; but he does not demand a treatment which is immediate and specific. If he is severely ill, all that may be needed for the moment is to tell him to go home, to take an aperient, and to stay in bed until you can come and see him in the morning. If, however, it is diphtheria the patient must go to bed at once and be given the appropriate dose of serum at the earliest possible moment. There is no question as to whether he can go and finish his day's work, or pay one or two visits to friends and relations on the way home. He had better

lie down where he is and be carried to his bed, and if his own bed is not a suitable one in which to pass his illness, he has got to be put into some other bed—and you have got to find it for him and to make the arrangements to get him into it. It is the same with the serum. There is no time to take a swab and to await a report. You will take one to check your powers of diagnosis, but if you have waited for the report before giving serum you have endangered your patient's life. Remember that whenever you receive a positive report on a diphtheria swab without having given serum you must look upon it as a serious criticism either of your clinical ability or of your devotion to duty. In this example the need for immediate action has been the reason for the essential time of cleavage. Action for which you must put off anything you may be going to do, whether it is taking your wife out to the theatre on her birthday, going to see your wealthiest patient, or even deferring for half an hour an operation for which you have arranged to give an anæsthetic.

In the next example that we may take it is again action upon which the essential line of cleavage depends, but it is action in the future and not immediate. The immediate need is to sort out those lesions that do or may demand operative interference from those in which they certainly will not. Let us take a case of vertigo. If you ask people how they would investigate a case of vertigo they will tell you all sorts of elaborate and scientific investigations, among which they may casually refer to an examination of the drum-head. I should think that examination of this was the first thing to do, and that any other investigations are beside the point until you know whether there is chronic suppurative otitis media or an acute otitis media. If either of these is present the need for operative treatment at some time in the near future is possible, and even probable. It may be a week or even a month before it should be done. But the essential line of cleavage in a case of giddiness lies between these cases and all those other ones of a purely medical nature which are always distressing, but in which, whether grave or slight, the question of operative interference will never arise. When you first see such a patient it is not action that is needed, it is preparation for possible action that you must consider. It is most important in such a case not to go on seeing the patient from day to day without giving any hint that an operation may be necessary and then to spring it on him at the end of the week as a matter of urgent necessity to be done in a few hours' time. This is just as bad as rushing such a patient into a hospital or nursing home and operating on him the same evening when the condition does not really need it. I fear that this is far too commonly the custom to-day, with the result that the patient undergoes the operation in a state of mental upset that is not conducive to recovery, without proper physical preparation, and without that pre-operative meditation which is essential to all good surgery and with which one should only dispense when it is really a case of life and death. In the case that we are discussing of a patient with giddiness and evidence of chronic suppurative otitis media there is no need for urgency. You may not even tell the patient that operation is in your mind; but you will arrange to see him again in a day or so. You will certainly not let him go on a journey, and you will probably knock him off work. When the decision that an operation is needed has been made, it is usually a good precept that "if 'twere done, 'twere well 'twere done quickly." Many people do not like having an operation of a serious nature hanging over their heads; but if there is an important piece of business to be finished, if there is someone on the way home whom the patient wishes to see before the operation, if there is some important function, such as a family wedding, which he wishes to attend, you should always be prepared to take some responsibility for the delay for a reasonable time. Remember that you must never jockey a patient into an immediate operation for your protection rather than for his benefit. You will then be in a stronger position to demand instant operation when it is imperative.

The presence of a symptom which compels immediate interference in the course of an existing disease may be taken as the next example of the essential line of cleavage. Let us taken an acute inflammation of the middle ear cleft as our text. This, in itself, is not serious. There is, remember, an involvement of the mastoid region in every case in which we can diagnose otitis media. That is a new bit of knowledge which we have acquired in the past few years as the result of radiography. Sometimes that inflammation passes through the mucous membrane to the bone and if the degree of osteitis is such that it will not recover without operative interference we call it mastoiditis. This again is not serious to life. But it becomes so when the disease spreads a little further through the meninges either to the lateral sinus or to the meningeal cavity. In a case of acute inflammation of the previously unaffected middle ear cleft in which there is a suspicion of mastoiditis the essential line of cleavage is to decide at any given moment whether sinus absorption or meningitis is impending. If so instant operation is imperative and you must put aside all other work or amusement to deal with the condition before you go to

bed that night. If it is not, operation should be deferred until the condition of the patient and those under which you are working are such that you can do the best possible work on tissues that are in such a state that the processes of repair are at their maximum in the days that succeed your operation. To this problem I shall return in my third lecture.

Sometimes the essential line of cleavage lies in the condition of the patient. Consider, for instance, the case of an elderly man suffering from difficulty in swallowing. Our inclination is to do two things: to find out the cause of the difficulty and to consider whether we can do anything to cure that cause. But dysphagia may mean anything from an inability to eat solid food such as steak and cabbage to an inability to get down even fluids. The essential line of cleavage therefore lies between the case in which the manipulations needed to make this diagnosis are possible, and that in which the condition of the patient demands an increased intake of fluid and of food before any such manipulations can be applied. In absolute dysphagia or in anything approaching it the best thing to do is to put the patient to bed and give him nothing by the mouth for forty-eight hours. In the meantime you must administer fluid either by the rectum or by a vein, and it is well also to give him bromide by the former route. Above all you must keep the extremities warm—feet, hands and ears. At the end of that time the power of swallowing semi-solids may have returned, and after a week of these the patient may be fit enough to proceed to the radiographic department. The majority of such cases prove to be intractable carcinomata of the œsophagus, and treatment consists in guiding the patient gently down the slope of his last days rather than in attempting any curative treatment.

Or again the essential line of cleavage may rest in the physique of the patient. When a woman comes to see you complaining of hoarseness with loss of voice, there is all the difference in the approach to the case when she is middle-aged, fat and plethoric from what it should be when she is young, dainty and petite. The former is likely to be due to beer and brawling, and symptomatic treatment alone be possible, whereas the latter patient may be in the early stages of a consumption. Wherever you work, this power to sort out the patient who may be developing consumption from those that are not will form an important part of your work. Remember that to-day there is no excuse for you if you allow a patient who has been continually under your care to pass slowly on to a fully-developed case of tuberculosis without your having taken adequate steps for a diagnosis to be made.

In all the problems that we have considered the essential line of cleavage has depended upon the need for action either at once or in the near future. There is a further sub-division in which the essential line of cleavage depends upon sorting out from a number of trivialities the cases of disease that may be serious but in which treatment to be of avail depends upon exactness of diagnosis determined after a considerable period of time. An example of this is the simple achlorhydric anæmia of the middle-aged woman. At a stage where treatment is of avail there is a condition of the tongue characterised by the disappearance of the papillæ. It is called a glossitis, though I doubt whether there is an inflammatory factor in its pathology. The old-fashioned examination of asking the patient to put out the tongue should result in your sorting out this patient from all the others.

Let me end this lecture by telling you how a doctor, who had for many years a large panel practice, dealt with these patients, such as the young person in whom he suspected phthisis or the middle-aged woman with anæmia, who needed a complete and careful physical examination and yet did not need immediate attention. He never tried to do it during the surgery hours, when a long examination of one patient kept all the others waiting, and when his attention was bound to be distracted by the numerous disturbances that are inevitable under such conditions. He used to arrange with the patient a time, perhaps a day ahead, perhaps a fortnight, convenient to both when he could see him or her at home, and if he thought it necessary he would ask the patient to be undressed and in bed before the time appointed. In this way he claimed he could, without waste of his or other people's time, assure himself that he was not allowing this type of serious illness to pass unnoticed into a hopeless stage. I mention this as a method that suited a certain type of practice; it will not suit all. Wherever you go you will have to organise your work to suit the conditions under which you are working and your patients are living. Take care that you have thought out the problems before you, and one of those problems will be the essential line of cleavage between groups of cases when your patients first come and tell you the symptoms that make them think they are not normal human beings.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Osteitis Fibrosa and Osteitis Deformans

A Paper by A. D. Bell, Esq., and F. N. Glover, Esq.

MR. CHAIRMAN and GENTLEMEN,—In this paper we have tried to collect the more important facts from the rather conflicting literature on osteitis fibrosa and Paget's disease (osteitis deformans).

Osteitis fibrosa occurs in two well recognised forms: a generalised cystic form attacking many bones, a disease which may occur at *any* age and is due to a parathyroid tumour; and a type, localised chiefly in the skull or in the growing extremities of long bones, often cystic, a disease of youth. Paget's disease, too, can be generalised or localised, and occurs usually after the age of forty years. With the exception of the parathyroid tumour, the cause in each case is unknown, but it is considered by Lawford Knaggs to be due to some toxin, absorbed from the gut or a distant focus of infection. Each system has a specific resistance to a given toxin, and, in these cases, the bones succumb. Why one bone should be affected and not another is at present unknown, but, on this theory, it is assumed that the threshold level of that particular bone against the toxin is lowered, so that that bone alone is damaged. Trauma to an individual bone such as contusion or fracture may lower its resistance sufficiently to allow the toxin to attack it, and so start the process of disease.

To deal first with generalised osteitis fibrosa (von Recklinghausen's disease). The clinical picture is interesting, though none of the symptoms alone can be regarded as diagnostic. At an early stage the patient may complain of pain in one or several bones, especially when pressure is applied, and may notice a deformity or, in the superficial bones, an actual increase in diameter. Spontaneous fracture is not uncommon, whilst occasionally a case is brought to light by X-ray for some other purpose, the patient having suffered little in the way of previous symptoms. The most striking features in a case of generalised osteitis fibrosa are the blood changes; serum calcium rises to more than double the normal value of 10 mg. per 100 c.c.; serum phosphates are lowered from the normal of 3 mg. to 1—1.5 mg.; whilst phosphatase, the enzyme essential for correct laying down of calcium phosphates in bone, may show an increase of over eight times normal. Such a typical blood picture is not always present, and, even when it is, a diagnosis of hyperparathyroidism should not be made until a calcium and phosphate balance is estimated. This entails the regulation of calcium and phosphate intake in the food and the estimation of the amount in the excretions. Calcium is excreted both in the urine and fæces. Fæcal calcium remains remarkably constant, so that a urinary estimation alone will show any discrepancies when the intake is regulated. Unless this rather laborious precaution is taken, simple renal dysfunction may be mistaken for osteitis fibrosa, for, with intake and output balanced, it is quite possible for a raised renal threshold for calcium and a lowered threshold for phosphates to account for these blood changes. The significance of phosphatase is as yet incompletely understood, and it is raised in several bone diseases. In osteitis fibrosa (generalised) the balance is not maintained, urinary calcium being increased as much as eight times the intake. This indicates a large drain on calcium stores in the body and explains the general decalcification of bones.

Urinary phosphates, too, are increased. This, at first sight, seems to contradict the findings of lowered blood phosphates. But phosphates are essential for the excretion of calcium, and the soluble form (calcium hydrogen phosphate) in which calcium is excreted in urine contains more phosphate radicles than the tricalcium phosphates obtained directly from bones. Thus more phosphate is excreted in the urine than is set free from the bones, so that it may be on this account that serum phosphate is lowered.

The upset in calcium metabolism disposes to numerous other symptoms, any of which may be the chief cause of the patient's complaint. Hypercalcæmia causes muscular weakness or hypotonia, with diminished response to electrical stimulation, which contrasts well with the increased excitability of hypocalcæmic tetany. Increased excretion of metallic salts results in polyuria and, consequent on this, increased thirst. Concentration of calcium in the blood accounts for metastatic deposits of calcium salts and urolithiasis. Urinary stones, in turn, may cause nocturia or painful micturition due to irritation. Nausea, vomiting and constipation are frequent symptoms, whilst anorexia and loss of weight is no less common. Should the disease occur in adolescence, stunting of growth must occur.

Since the classical work of Mandl, who cured the disease by removal of overactive parathyroid glands, these structures have been regarded as the primary cause of the change associated with this disease. Palpation of the neck should be undertaken as a routine, and glandular enlargement is suggestive, but even if nothing is felt the difficulty

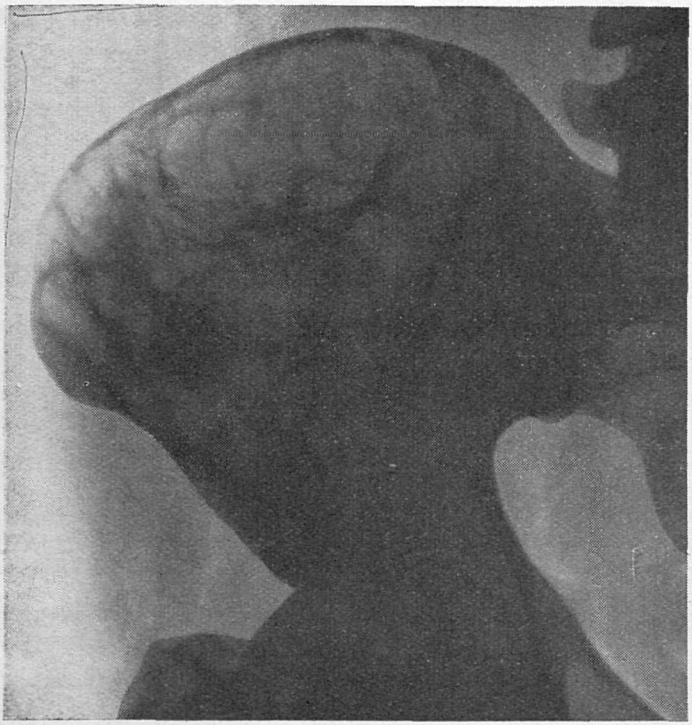
of accurate discrimination and the possibility of an abnormally placed gland, behind œsophagus or in the mediastinum, must not be forgotten.

The similarity between the minute structure and radiographs of the generalised and localised forms allows them to be considered together, but first the localised disease will be described.

any of the other symptoms ascribed to hypercalcæmia.

X-RAY

In well-developed cases the X-ray shows a marked widening in the bone, generally in the metaphyseal region. Multiple cysts are apparent,



Right Ileum, from a case of Generalised Osteitis Fibrosa, showing Cyst formation

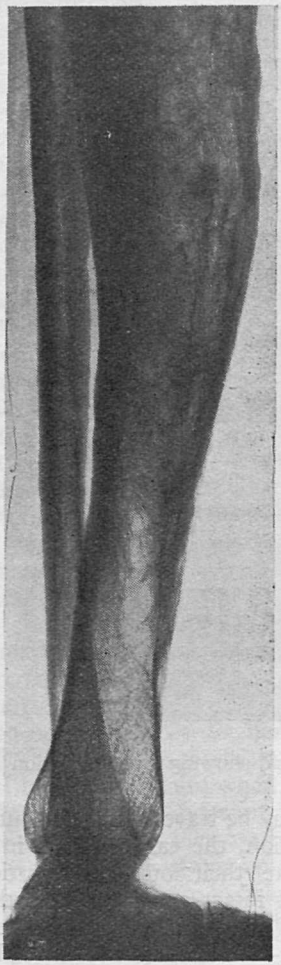
This is a more common disease, occurring in youth, generally between the ages of five and fifteen years. It attacks the upper ends of the tibia, femur and humerus, and occasionally individual skull bones. Symptoms have an insidious onset: slight pain in the limbs mistaken for growing pains, or, indeed, bones may be quite painless. Healing may take place of its own accord in six months to 2½ years, whilst failure of complete healing, and the remains of a single cyst, may in later life cause a spontaneous fracture. This is the latent form of the disease, and when described in adults must be regarded as being present since childhood. In contrast to hyperparathyroidism the blood picture, serum calcium and phosphates, and phosphatase are normal. Calcium and phosphate balances are normal. Thus the patient does not complain of urinary troubles, stone or polyuria, nor does he suffer from hypotonia nor

and these may be traversed or surrounded by new bone formation, the calcium salts in which tend to exaggerate their outline. Cortical bone is thinned, but intact and smooth, and there is no evidence of subperiosteal osteogenesis. Occasionally cyst-formation is absent, diffuse decalcification resulting in actual cortical thickening and decrease in size of the medulla. This condition, similar to that seen in Paget's disease, occurs sometimes in the cranial vault, whilst single skull bones when specifically affected show a typical "orange-peel" appearance. In most stages of the disease the medulla is destroyed and invaded by new bone.

PATHOLOGY

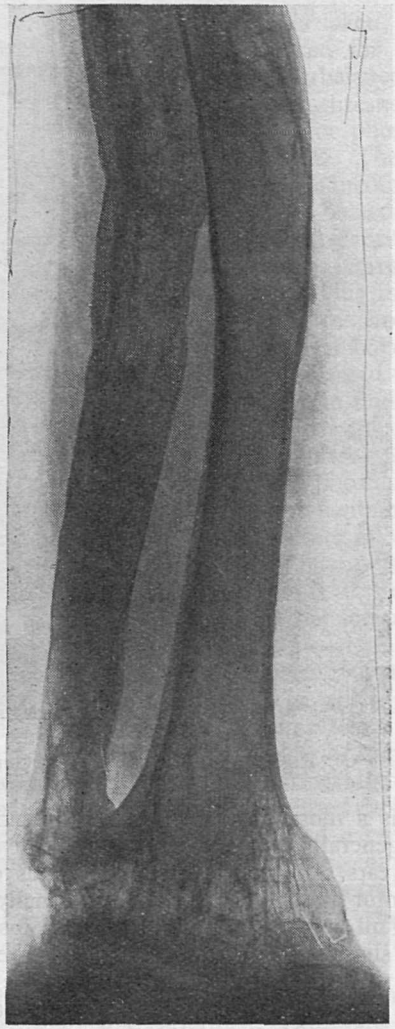
The exact pathological process is still one of conjecture, but the sequence of events is probably as follows: The cortical bone is attacked either by Knagg's toxin or by a hormone of parathyroid

overactivity or by some unknown means. This bone is decalcified, a process of osteoporosis which, according to Bergstrom, is due chiefly to an increase in blood flow through the part. In support of the theory that vascularity causes decalcification is put forward the fact that enforced inactivity of a limb after fracture before union has been effected causes general osteoporosis of that limb bone. The decreased blood supply needed by inactive muscles diverts the blood to the bones, increasing their vascularity. Again, in acute disease of bone, increased vascularisation leads to decalcification, so that, should a sequestrum appear which actually has normal calcium deposition, this, nevertheless, seems highly calcified in contrast to the rest of the bone.



Tibia showing Generalised Osteitis Fibrosa

With increased vascularisation there appear numerous osteoclasts, which ingest, by a process of " dissection resorption " (Schmorl), the decalcified trabeculæ. At the same time as the advent of osteoclasts, osteogenic connective tissue fills in the spaces caused by resorption. Osteoblasts, formed possibly by metaplasia of spindle cells, appear from the walls of the blood vessels and new osteoid (uncalcified) tissue is formed. This may be formed into lamellar bone or may again be resorbed by osteoclasts, and the process repeated. Areas of hæmorrhage may occur in the vascular connective tissue, and their removal by osteoclasts, which act as phagocytes and ingest blood pigments, may result in cyst formation. Local areas of giant cells, similar to osteoclasts, are characteristic features of the disease, and the other main theory of cyst formation advances the possibility of central



Radius from a case of Generalised Osteitis Fibrosa

necrosis in these giant cell areas (Geschichter and Copeland). These cysts are filled with serous, gelatinous or hæmatogenous material, and Bloodgood states that many seen in X-ray are actually areas of solid fibrous tissue. Although resorption and ossification takes place simultaneously, the osteoclastic reaction is far in excess of the osteoblastic and there is no periosteal bone formation. Small-cell infiltration indicative of a chronic process is absent, and the obliteration of the medulla explains the absence of fat cells from a histological section.

OSTEITIS DEFORMANS OR PAGET'S DISEASE

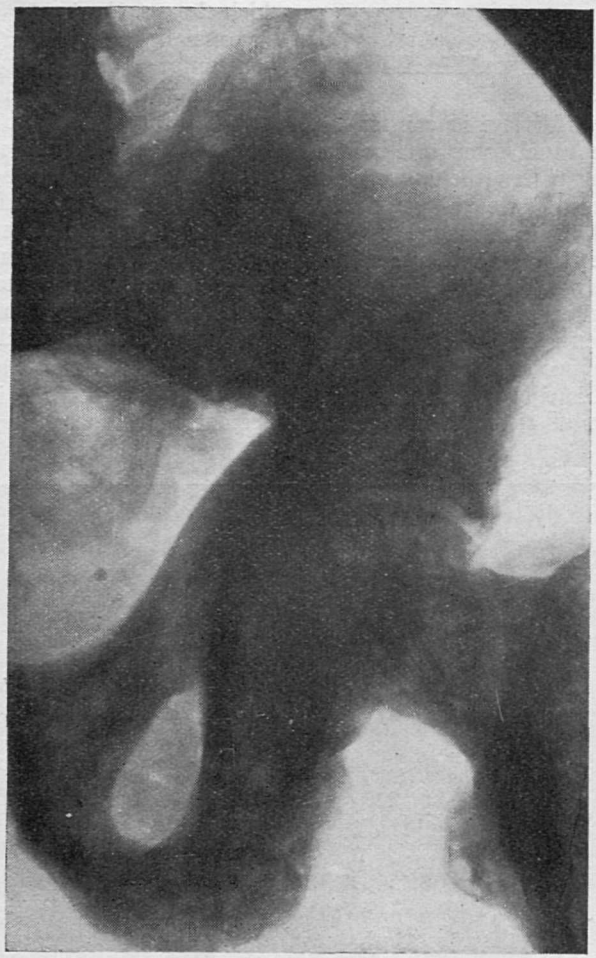
Clinical Picture.—Paget's disease in contrast is one of middle age. The usual complaint of the patient is that of bending or lengthening of the long bones or an increased size of the skull. Gescheckter regards pathological fracture as the exception rather than the rule, whilst Juffe states they are not as rare as the literature seems to indicate. At this hospital several cases of pathological fracture have been seen recently. In a very advanced case the appearance of the patient is diagnostic. The head is enlarged and there is marked general kyphosis of the spine, forward bowing of the femora and forward and side-to-side bowing of tibiæ. Decrease in stature causes appearance of apparent lengthening of the arms. Schmorl states that the disease is a local one occurring first in the vertebral column, but his methods of diagnosis are so intricate that they are useless from the clinical aspect. He does, however, make the rather disconcerting statement to the effect that if the spine is carefully examined in all post-mortem cases, evidence of Paget's disease will be found in at least 3 per cent. In cases in which the vertebral column is markedly affected, the canal is so narrowed that paraplegia results from compression, whilst deafness due to pressure on the acoustic nerve is not an uncommon symptom. Atheroma is said to be a prominent feature, though the post-mortem records here for the last ten years showed no abnormal changes. Serum calcium and phosphates are normal; phosphatase is increased, whilst urinary calcium is increased about four times normal (in 80 per cent. of Hunter's cases). An interesting feature is that, although white count is normal, there is an increase in the number of basophil cells.

X-ray appearance.—The outline of the long bones tends to become indistinct owing to the irregular deposition of periosteal new bone. The

Skull in Paget's Disease

cortex, being replaced by a mosaic, cancellous bone poor in calcium salts, shows as an abnormally wide diffuse area encroaching on and narrowing the medullary cavity. When deformity occurs, bone deposition becomes more apparent on the concave surface, in the line of weight transmission, and as healing progresses more and more marked becomes the sclerosis. The vault of the skull shows a typical "nigger-wool' appearance, and especially does the outer table lack definition. The enlargement is always outwards and never affects the size of the cranial cavity, though fissures are obliterated and certain cranial nerves may be affected. The size of the cranial vault may be well over 1 inch thick. The pelvis is thickened and widened showing an indistinct blotchy appearance, in contrast to the hip bone in osteitis fibrosa (generalised), which has well-outlined borders and cysts.

Pathological process.—The sequence of events in this disease is in many ways similar to that of osteitis fibrosa. Cortical bone is destroyed and, by a similar vascular response and widening of blood channels, decalcification occurs. Osteoclasts and new connective tissue infiltrate this decalcified bone and remove the trabeculæ. As rapidly as these trabeculæ are removed so a new, soft, cancellous bony tissue takes its place. Osteoblasts in plenty have by now appeared on the walls of the blood spaces, and the anabolic process tends to mask the katabolic or osteoclastic destructive process. A subperiosteal osteogenic process helps to thicken the bone, but, owing to lack of calcification, the new tissue, regular and mosaic in pattern, is still very soft. It is at this stage that bending, semi- or complete fracture, occurs.



Pelvis in Paget's Disease

Next comes the resorption of this mosaic cancellous bone, and its transformation into

lamellar bone by repeated resorption and calcification. This process causes the appearance of lines or rings of calcium deposits around each new bony trabecula in section staining with hæmatoxylin, and designated "the cement lines" by Schmorl and "the curvilinear markings" by Knaggs. The mosaic appearance produced is said to be characteristic of the disease, though a similar chaotic structure without the presence of cement lines occurs in osteitis fibrosa.

When further healing occurs, calcium deposition causes the sclerotic appearance indicated in the skiagraph. Hæmorrhagic necrosis leading to cyst formation is described, though Juffe states that the presence of cysts must be regarded as indicative of osteitis fibrosa and not Paget's disease. That this is a more chronic process than osteitis fibrosa is shown by an infiltration of lymphocytes. The narrow cavity is never completely obliterated, so that the presence of fat cells in microscopical section may be expected.

The many features put forward to distinguish Paget's disease from osteitis fibrosa seem theoretically numerous and may lull one into a sense of false security. For, in actual practice, few cases are ideal; few show all the recognised signs, and, indeed, in those that do, differential diagnosis is obvious. It is those cases at the border-line between one disease and the other which cause such difficulty; symptoms, signs and special tests being conflicting in their results. But, always excluding the particular case of hyperparathyroidism, if we adopt the toxic theory for a moment, here we have an explanation. The one is a disease of the young, the other of middle age. Why should not overlap occur between two processes alike in many ways, and at this overlap a hybrid type of disease be produced embracing features of both diseases and conclusive evidence of neither?

Correspondence

Urological Impressions

To the Editor of the GAZETTE

SIR,—After reading my friend A. R. Clarke's most interesting Urological Impressions in the *Gazette* of March 18th, I was left with a feeling of anxiety that he had visited the Johns Hopkins without meeting that urological "uniquity" Dr. Guy Hunner, who makes Baltimore a Mecca for gynæcologists, perpetuating the Kelly tradition, and more especially the Kelly cystoscope. I am glad to see that Mr. Clarke is intending to return to Baltimore, and it would be interesting later to read his impressions of Dr. Hunner.

Yours, etc.,

T. F. TODD.

28, St. John Street,
Manchester, 3.

Surgeon Dentist to H.M. The King

To the Editor of the GAZETTE

SIR,—I feel that you would like your attention drawn to the fact that an old Guy's man, Mr. C. S. Morris, who is doubly qualified, has been appointed Surgeon Dentist to H.M. The King.

I write this as I saw there was no notice of this appointment in your last issue.

Yours, etc.,

R. R. MACINTOSH.

27*a*, Blackburne's Mews,
Upper Brook Street, W.1.

Psychological Phenomena

To the Editor of the GAZETTE

SIR,—Dr. Gillespie's lecture, as recorded in your issue of 30th January, is of considerable interest, but I would point out that it requires emendation on a question of fact. It is now possible to make predictions concerning psychological phenomena.

I would refer first to Prof. Adrian's recent brilliant experimental verification of my own predictions in the realm of physiological psychology. Two of the predictions and verifications are :—

Predictions.	*Verifications.*
Burridge. "A New Physiological Psychology," Arnold, London, 1934. P. 43.	Adrian. *Proc. Roy. Soc. Med.*, 1936, xxix, 197.
The picture thus presented of an organ of mind shows it as consisting of a vast complex of discrete groupings of neurones, each group dancing to its own tune with its own strength.	The cortex need not be regarded as a sytem of several million independent units. The cells act in groups, small or large. Nerve cells are rarely at rest, but tend to discharge periodically, though there may be no afferent excitations to arouse them.

P. 54.	
. . . there exists an integrative tendency which determines that groups of neighbouring yet isolated neurones must seek a common rhythm and a resultant.	Groups of nerve cells tend to act in unison when there is nothing to prevent them. These co-ordinated waves of activity express the tendency of nerve cells to associate together.

My mail indicates that the closeness of correspondence between the predictions and their verifications is regarded with considerable interest. The interest is increased when it becomes known that the verification was done without knowledge of the prediction.

Many other psychological phenomena also are predictable. One can predict, for example, that there ought to be two colours with the peculiar properties that on admixture they will take the colour out of each other and produce grey. One cannot predict, of course, what names the colours have been given. But, having made the prediction, one can look for colours having that property, and then find them to have been called red and green.

Not only have the chief facts of colour vision and colour blindness now become predictable, but many psychological phenomena as well. One can predict, for instance, that changes of one type in nerve cell activity should lead to a man believing himself to be the possessor of boundless wealth, whereas changes of another type should lead to the belief of having lost all that he possessed.

To make these predictions, however, requires a knowledge of the properties of rhythmical structures, such as hearts, beyond that which is generally attained at present. Doubtless every student and teacher in the wards at Guy's is acquainted with the properties of heart muscle, such as the " all or nothing law " given in our textbooks. The vast majority, however, are probably unaware of the laws which govern the stimulation of active beating hearts, the type of heart that one deals with at the bedside. Those laws were discovered in India, and are now slowly penetrating into other countries. When penetration is completed, the burden of the medical student will be much lightened. For, instead of having to consider a vast number of differing theories of colour vision, say, or of psychological phenomena, he will just deduce what the facts of colour " ought " to be or how a man's beliefs should change with change of nerve-cell activities, and find that his deductions accord with the facts that he meets.

Yours, etc.,

W. BURRIDGE.

The Dept. of Physiology,
King George's Medical College, Lucknow, India.

Marris's Atropine Test

To the Editor of the GAZETTE

SIR,—In an issue of the *Gazette* some time ago an account was given by a contributor of a means of early diagnosis in enteric known as Marris's atropine test.

I should be glad to have any further information on this subject that may be available, and particularly as to whether it is generally accepted as being reliable.

I live in a district where an early and accurate diagnosis in cases of enteric is particularly desirable, and laboratory facilities not easily accessible. A simple and reliable test would be of great value, and, while I do not in the least doubt your contributor's statement, the test mentioned is one I never heard of, and I should like to hear other opinions about it, if possible.

Yours, etc.,

G. DUNDERDALE.

P.O. Nanyuki,
Kenya Colony.

Influenza

To the Editor of the GAZETTE.

SIR,—I wish to thank you for the *Gazette*, which arrived to-day; particularly for the very fine account of Dr. A. H. Douthwaite's lecture. It has put in front of us what some of us have been dealing with for many years now, but in a way that is clear and without redundancy. Furthermore, it points out the possible loopholes of error in dealing with so many cases, where each one may be individually different.

Personally, I should not be surprised if this regular plague is not something in connection with the Planets, from time to time, as it appears to be instantaneous all over the world. At the time it strikes the human being, and the way it picks out the delicate mucous membranes, is, of course, very similar to a poison gas, but perhaps not so severe.

In conclusion, I should like once more to thank Dr. Douthwaite and yourself for the publication of this fine lecture, and, to broach something a little more cheerful, to wish the '89 Club a very congenial evening on the occasion of their forty-first Dinner, 26th May, if I may.

Yours, etc.,

JOHN KENDALL.

Keinton Mandeville, Somerset.

S. J. de N.

Reviews

Diagnosis and Treatment of Venereal Diseases. Edited and Revised by ROBERT LEES, M.B., F.R.C.P.(Edin.). Published by Messrs. E. & S. Livingstone. Third Edition, 1937. Pp. 608. *Price* 15*s*.

THE third edition of this well-known work has been ably revised by Dr. Lees as a tribute to the memory of the late Dr. David Lees. Much of the subject matter has been rewritten and brought up to date, although the original arrangement of the work has been retained. Dr. Lees has been assisted by Dr. R. Cranston Low, Dr. William Logan, and Dr. R. C. L. Batchelor, who have been responsible for certain sections.

Two appendices have been added to the present edition and should be widely appreciated. The first consists of a list of trade names attached to the common drugs used in the treatment of syphilis, and the second is an abbreviated list of clinics for the treatment of venereal disease in all parts of the world; the latter should assist in providing the patient with a greater continuity of treatment. It is regrettable that the excellent index of the second edition has been considerably curtailed, with the result that the present index is inadequate.

There are minor points in the script with which one does not agree. For example, in describing the skin manifestations of the secondary stage it is stated that "polymorphism . . . is characteristic only of syphilis." This is misleading, and it would be a pity if all cases of chicken-pox were diagnosed secondary syphilis. Again, insufficient stress is laid on the value of arsenical treatment in dosage varying with the weight of the patient—a reasonable method too long neglected in clinical medicine. But, in spite of these and other occasional differences of opinion, for the general instruction of students and practitioners alike, this book is worthy of recommendation.

Professor Major Greenwood, dealing with venereal diseases, recently wrote: "There is, I think, this ground for optimism. That on the whole the crowd attitude, as expressed in its administrative rules and its social reactions, is a little saner than before the war. But this generation will have passed away and many billions of words will have been spoken before the most eminently preventable of all crowd sicknesses are prevented." The prevention depends not only on the Public Health measures adopted and the acceptance of a venereal patient on the same terms as any other sick man; it depends, also, on the general practitioner's knowledge, his ability to diagnose the disease when it occurs and to make available for the patient adequate treatment so that the sources of contact are slowly, but surely, removed. This book is of reasonable size and contains the essential matter; it should help in attaining that ideal.

D. E.

Sport

Rugby

Guy's v. Old Cranleighans

AT Honor Oak Park on Saturday, February 27th, this match was abandoned after twenty-five minutes' play, when the Old Boys were leadings by a try (3 points) to nil.

The ground was so heavy and waterlogged that it was doubtful whether there would be any play at all; however, the captains agreed to try it out, but no sooner had the game begun than it started to rain heavily. Gradually the conditions became worse, and eventually a rain-storm made further play an impossibility, so the referee called the teams together and decided to call the game off.

In the meantime, both sides had made good efforts to get through, and, considering the ground and the greasy state of the ball, the Old Cranleighans' backs ran and passed very well. The visiting forwards were also very quick in breaking up, and were well together in the loose rushes, while the Hospital backs took advantage of the strong wind and driving rain by pushing ahead and following up.

The Old Boys were the first to attack, and nearly scored after five minutes, when Reeve broke away and passed to Hindley, whose pass, however, was dropped in front of the Hospital posts.

A little later Morey was held up on the line, but from the scrum which followed the visitors heeled and the ball was passed very quickly along the whole three-quarter line to Reeve, who went over for an unconverted try in the corner.

Guy's retaliated and immediately penned the Old Boys in their 25. In one of the Hospital attacks Birks and Allen took the ball over the line, but were beaten for the touch-down. Soon afterwards Crawford, Williams and Darke made

another great effort, but the latter was thrown into touch when a try seemed probable.

Play fluctuated from end to end until another heavy downpour put an end to what promised to be an interesting game.

Team.—C. Halamandres; A. B. Baxter, P. H. Birks, R. D. Allen, A. M. McCall; J. P. Crawford, D. I. Chapman; M. R. Kark, E. S. Nicholson, W. H. Crabbe, A. Forbes, J. R. D. Williams, C. S. Darke, F. Walt, I. G. Robin.

Inter-Hospitals Cup—Semi-Final
Guy's v. St. Thomas's

GUY'S qualified to meet St. Mary's in the Final of the Inter-Hospitals Cup when, on Tuesday, March 2nd, they managed to defeat St. Thomas's after a very hard and enjoyable game by the narrow margin of 2 penalty goals (6 points) to a try (3 points).

It was a glorious afternoon, and a large attendance of supporters from both hospitals saw a fine open game and an exciting contest.

Guy's were not quite at full strength, as Van Steytler was still away, but Dick made a welcome reappearance.

St. Thomas's fielded a very fine pack, and in the second half in particular gave Guy's several anxious moments. However, Guy's appeared to be quicker and neater all through; their back division carried out several good passing movements, but St. Thomas's put up a sound defence in which Young and Barrow were outstanding.

Nicholson was in great form, and obtained possession in most of the set scrums. He was ably supported by the rest of the forwards, who saved their line either by a quick heel or a rush, and, though in the last quarter of an hour the St. Thomas's pack strove manfully for victory, the Guy's pack put up a very good show and lasted well.

Both full-backs did everything to fill those in front with confidence, Halamandres in particular fielding without blemish and finding touch well down the field.

The two packs raged together as hospital packs have from time immemorial. There was a rousing start, a thrust by either side, and a taste of the fearless tackling to come.

St. Thomas's raised hopes when they gained a footing in Guy's 25, and Baxter did well to tackle Norman when in full flight for the line.

For a time play was confined to mid-field, and then Lewis started a dangerous movement for Guy's, when he broke through and punted ahead. Following a scrum in front of the posts, Allen missed a drop at goal from twenty yards' range and, after twenty minutes' play, St. Thomas's were penalised for a line-out infringement and Kark gave Guy's the lead by kicking a splendid goal from a wide angle on the 25 line.

A little later Guy's were awarded another penalty, this time for offside, and from near mid-field Kark kicked another fine goal.

Towards the interval St. Thomas's did much better, and when the whistle went for half-time they were attacking in Guy's 25.

Immediately on resuming Williams and Barrow made a threatening rush and only a brilliant save by Crawford rescued Guy's from a dangerous move. The St. Thomas's forwards were now making a fine effort, and it began to look as though Guy's might find the strain too much. However, Dick relieved the situation with a long punt, and Baxter, following up very fast, caught the full-back in possession.

A try appeared certain when Allen and Birks got through together, but Murray got back very quickly and saved.

Williams drove Guy's back with a long kick, and then, Norman following his own punt ahead, gathered in his stride and went over for an unconverted try in the corner.

St. Thomas's were now going very hard and the forwards hammered away only a few yards from the line, but spoiled some of their efforts by getting offside.

In the closing stages Guy's staged a grand recovery, and Nicholson led a dribbling clearance to St. Thomas's 25, when the whistle sounded for no-side.

Team.—C. Halamandres; A. B. Baxter, R. C. S. Dick (Capt.), R. D. Allen, P. H. Birks; J. P. Crawford, W. J. Lewis; M. R. Kark, E. S. Nicholson, H. H. Crabbe, A. Forbes, J. R. D. Williams, F. Walt, I. G. Robin, C. S. Darke.

Guy's v. Aberavon

ABERAVON were far too good for Guy's at Honor Oak Park on Saturday, March 6th, when they obtained an easy victory by 3 placed goals and a try (18 points) to nil.

The visitors fielded an exceptionally strong side, which included T. O. James, the Welsh full-back, and their brilliant team-work and backing-up made them appear superior in all departments. No doubt Guy's were feeling the effects of their hard Cup-tie and seldom appeared dangerous.

In view of the mud and greasy ball the game was surprisingly fast. The visiting backs combined cleverly with Davies at fly-half, and Thomas and Hopkins, the centres, were particularly good in giving and taking reverse passes. The forwards not only scrummaged effectively, but frequently

joined in short passing movements with their three-quarters. At full-back, James gave an object-lesson in well-judged fielding and kicking.

Crawford and Dick did very well for Guy's; the former made several plucky efforts to break through and Dick, though too closely marked to have much chance, frequently saved the Hospital by clever kicking.

The visitors scored after five minutes when D. M. James led a dribbling rush which ended in Thomas going over for a try, which T. O. James converted. Soon after, D. M. James picked up in the loose and touched down, for T. O. James to kick another goal.

Before half-time Thomas took a reverse pass from W. R. Davies to score a fine try.

Aberavon attacked almost continuously after the interval, but threw away several good chances through over-anxiousness, which cost them several penalties.

Guy's held out desperately until a few minutes from the end, when Brothers picked up in the loose and dashed over for a try, which T. O. James converted.

Just prior to this Baxter nearly scored for Guy's when he followed up a long kick ahead by Crawford, and was only just beaten for the touch-down by Brothers.

Team.—C. Halamandres; A. B. Baxter, R. C. S. Dick (Capt.), J. van A. Steytler, P. H. Birks; J. P. Crawford, W. J. Lewis, M. R. Kark, E. S. Nicholson, H. H. Crabbe, A. Forbes, J. R. D. Williams, C. F. Ziervogel, P. Fletcher, C. S. Darke.

Hospital Information, etc.

Notices

GUY'S HOSPITAL MEDICAL SCHOOL

THE ADRIAN STOKES MEMORIAL FELLOWSHIP

Applications are invited for nomination to the Adrian Stokes Memorial Fellowship. The Fellowship is open to duly qualified Medical Practitioners or Graduates in Science in Pathology or Bacteriology.

Applicants must not be more than thirty years of age and must be anxious to carry out further study in Pathology or Bacteriology in any of their branches.

The Adrian Stokes Memorial Fellow is required to carry out this study during a period of not less than six calendar months in his year of tenure, at a University, School or Hospital or other institution, subject to the approval of the School Council, except the School in which he has received his medical or scientific education. The Fellowship is of the value of approximately £300.

Applications for nomination to the Fellowship must be lodged with the Dean, Guy's Hospital Medical School, London Bridge, S.E.1, not later than April 23rd, 1937.

THE WILLS LIBRARY PERIODICALS

THE undermentioned list of journals was received too late to be included in the list published in the last issue of the *Gazette*. They are available in the Library of the Clinical Research Unit under Dr. Grant:—

Clinical Science.
Heart.
Journal of Pathology and Bacteriology. Vol. 30—
Journal of Physiology. Vol. 61—
Physiological Abstracts. Vol. 14—
Quarterly Journal of Medicine. Vol. 4—
Royal Society, Proceedings. Vol. 115—
Royal Society. Philosophical Transactions. Vol. 224—
Royal Society of Medicine, Proceedings. Vol. 27—

Papers by Guy's Men

Geoffrey Rake and Another. Studies on meningococcus infection: x. A further note on the presence of meningococcus precipitinogens in the cerebrospinal fluid. *Jour. Exp. Med.*, 1937, lxv, 317.

M. Mitman and Others. Encephalitis in measles. *Lancet*, 1937, i, 687.

Appointments

D. W. C. Northfield, M.S., F.R.C.S., appointed Assistant Surgeon to the Department of Neuro-Surgery at the London Hospital, E.1.

Changes of Address

D. P. King, M.B., B.Ch., 3, Wilberforce House, North Side, Clapham Common, S.W.4.

Patrick Clarkson, F.R.C.S., Buckston Browne Farm, Downe, Kent.

Births

JARMAN.—On March 3rd, 1937, at 79, New Cavendish Street, W.1, to Mary, wife of Dr. Ronald Jarman—a son.

McNAIR.—On March 3rd, 1937, to Grace, wife of Arthur J. McNair, of 9, Devonshire Place, London, W.—a daughter.

BROWNING.—On March 10th, 1937, to Dr. and Mrs. S. Barratt Browning, at Wellington House, Handsworth Wood, Birmingham—a daughter.

Marriage

SMITH—ADAMS.—The marriage arranged between A. Geoffrey Smith and Evelyn C. Adams will take place on March 30th, 1937.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *10th April 1937* — *Number 1271*

PASSIM

THE Lady Doctor, like the Lady Novelist, has undoubtedly come to stay, but with no sense of pride or prejudice, we feel that it will be many years before the demand for her services becomes sufficiently great to interfere seriously with our livelihood, and in some cases we imagine that the supply of these feminine healers must be more than equal to the demand.

Thus it was with surprise and mild amazement that we read Professor Ryle's letter in a recent issue of the *Daily Telegraph* advocating that women students should be accepted at Guy's for the clinical period of their studies. He asserted that, though the number of women medical students at Oxford and Cambridge was small, the chance of their undergoing their clinical training at a London hospital was even smaller, as they are barred from all but three of the teaching hospitals. This, he thought, was a very unfair handicap, and it must, he intimated, be particularly galling to some of these females of immense learning to think that they are so restricted, whilst any Tom, Dick or Harry of the opposite sex, or, as Professor Ryle put it, "men of poor calibre," can pick and choose as to which hospital they shall attend. He also pointed out that, while London Hospitals must necessarily give preference to London students, they had never disparaged, and in some cases had even taken great pains to attract, male students from Oxford and Cambridge, and that he did not see why all these hospitals, including Guy's, should not be willing to accept a certain small fixed number of women from these universities.

Such a proposition sounds at first both simple and harmless, but in reality there are many difficulties, and though no doubt many would welcome the removal of the ban on women, we have no hesitation in saying that we would not. However, before being accused of purely destructive criticism, we would add our reasons. In the first place, the enormous increase in the size of some of the firms recently and the giant Pre-Clinical procession seen following Dr. Lintott, seem to indicate that every effort should be made to restrict the number of students in the clinical period to a manageable proportion if any semblance of individual teaching is to be retained. Therefore it seems to us that if women are to be admitted, even only six each year as Professor Ryle suggested, this must be done by excluding a similar number of men, and if the congestion is as great as it already appears to be, then the position will become more than complicated.

At this point we can imagine many a medically-minded female reaching for her pen to inquire what harm would be done by excluding the six worst male applicants each year and substituting for them six intensely serious female graduates from Oxford and Cambridge.

But that again is not so simple. The majority of men enter the Hospital straight from school to start, either in the Dissecting Room or to study the Pre-Clinical sciences, and it is at that stage that the process of exclusion must take place, unless we are to reject male students from the universities. A small point, perhaps, but it must be very hard indeed to make a fair selection of the applicants for admission as students in the Medical School, and there are many examples in the profession of eminent men whose record at this stage of their career was far from promising.

However, even if there happened to be vacancies enough in the Clinical period to accommodate a few female students—and, of course, those in

London would have to be considered equally, if not in preference to those from other universities—the question as to whether or not medicine can be taught with advantage to a mixture of the sexes is still important, even in these days. For, though modesty is a thing of the past, women are almost unshockable and blushes rarely seen before the menopause, yet we feel that there are many aspects of medicine that would be difficult to discuss before a mixed audience—at any rate, in the frank and intimate manner that is possible in the wards to-day.

It is quite true that women might make very good ward clerks, when their ability to cook would be appreciated, but their presence would undoubtedly have a restraining influence on that free expression of thought which has always been a characteristic of the Dressers' Room.

In all, though we admire Professor Ryle for his boldness in making such a revolutionary suggestion, we can only see one substantial improvement to balance the many grave disadvantages that the advent of women students to Guy's would bring. That is that it would necessitate the rebuilding, at least in part, of the unhealthy relic of a bygone age, in which we are forced to live. For even though, with a stretch of the imagination and a long association with the meaner dwellings, some may still believe that this is fit for men to live in, certain eccentricities of the sanitary architecture preclude its being used as a hostel for women, as it is at present, and we doubt if anyone would care to condemn the luckless girls from Newnham to a life within these grimy walls. For their sake and ours we hope that the occasion will never arise.

AMONG the minor evils of the Great War were Flag Days and street collections. Hardly a day passed that we were not set upon by a bevy of what was then known as flappers, who removed our small change and thus reduced that pleasant sense of security which is derived from a jingling pocket. But what in 1918 could be regarded as a minor evil soon took in peace time the aspects of a very major one, and many developed special techniques, circumlocutory and circumvolutary, in order to navigate the perilous passages that confronted them on their morning trip to the office.

What, however, to the public was a running sore proved to the charities involved a veritable boon, and Guy's, among the seventy-odd hospitals in the London area, was not slow to benefit. On one day a year the City, West End and stations were invaded by our white-coated cohorts, with the gratifying result of some £1,200 (of recent years) being annually added to the credit side or our exchequer. A compromise has now been effected between the hospitals, the public and the Commissioner of Police, whereby a combined appeal for these seventy hospitals will be made during one week of the year—this year from May 2nd to May 8th. Each hospital has been allotted one day in the week, and a circumscribed area in which its collectors may ravage. For Guy's, May 4th is the big day, and we shall need a vast army of expert wheedlers if we are to reach a satisfactory total. Our efforts will be confined to a fairly restricted area which will be announced later, and, indeed, we are told that in certain sections we shall be directly competing with Bart.'s for patronage. To compensate for these restrictions it is hoped this year to muster one thousand collectors, as compared with some four hundred for previous years. To achieve this, help is being asked for from all quarters. No one is exempt. Male or female, tall or short, fair or frousty, girls in their early teens and old hoary-headed nonogenarians —all are required. Nine hundred Guy's students should be able to command a goodly selection of seductive sisters, cajoling cousins and ancillary, if Pre-Raphaelite, aunts. Let them all be canvassed. Shortly details will be available. In the meantime, we repeat, May 4th is the date.

RECENTLY a notice has appeared on the landing outside Victoria Ward drawing attention to the fact that after the first day of April in some unspecified year only two visitors, including the husband, will be allowed to see each patient, and that admission will be by ticket only. This seems to us a most reasonable idea, for we have never felt that the meddlesome herd of sightseers which always came coursing into the ward on visiting days, as if following a scent of gossip breast-high, can have done anything but harm to the mothers and their recently arrived offspring. However, judging by the clamouring mob outside Victoria on Sunday afternoon, this regulation has not proved as popular among relatives as was hoped, and several of the most regular members of the pack were heard to express their disapproval in no uncertain terms.

What the enormous attraction of Victoria to these people is, we have never discovered. It can hardly be the babies, for there is nothing new in them, and most of the feminine visitors have themselves far exceeded the three children and one-fifth prescribed by the statisticians, and must have learned all they will ever know about a baby. But whatever it is, the disappointment was obvious,

and it has been suggested that some of this might be alleviated by displaying on a placard outside the ward, the answers to those questions that are asked by every visitor. In this way the neighbours, even if they were not able to say for certain that the child did really take after the husband, at least would be able to retail the news as to whether the instruments had been applied, whether chloroform was used, and, of course, just how many stitches had been needed.

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IT was thought at one time that the building of Nuffield House would obscure the pleasant view over the Park, which was obtained from the windows of the Medical Block. To what extent that has occurred we do not know, but no doubt any minor obscurities have been amply repaid by the occasional glimpses of the sick rich which are to be had from that side of the building, and one occupant of an adjacent ward informed us that, as a group of patients sunned themselves on the balcony, a figure was seen to rise upon his bed in a window of Nuffield House and remove the greater part of his pyjamas.

The reason for this gesture, of course, we do not know. Perhaps it was the central heating; perhaps merely a wash-out, or possibly the patient was just another strip-tease artist, but, whatever the cause, a more regular use of the blinds might be encouraged.

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DR. HAMPSON spoke recently at a meeting of the Kent branch of the British Medical Association, and, mindful of our own lapses, we would draw attention to the quaint wording of the announcement in the *British Medical Journal*, which was noticed also in *Punch* :—

" Kent Branch, Bromley Division.—Joint meeting with the Beckenham Medical Society at Railway Hotel, Beckenham, Thursday, March 25th, 8.45 p.m. Dr. Hampson: 'Dyspepsia.' Preceded by a supper at 7.45 p.m."

The last supper, we suppose.

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WE congratulate the following on their appointments :—

Dental House Surgeons—

To Mr. Doubleday and Mr. Messenger—
Mr. W. A. Vale.

To Mr. Pritchard and Mr. Hooper—
Mr. J. C. Robertson.

To Mr. Kelsey Fry and Mr. Rushton—
Mr. H. B. Shay.

To Mr. Bulleid—
Mr. J. L. Harrington.

To Mr. Bull and Mr. Rix (Children's Dept.)—
Mr. D. C. Howe.

To Prof. Fenn (Prosthetic Dept.)—
Mr. W. K. Weighell.

Dental Assistant House Surgeons—

To Mr. Doubleday and Mr. Messenger—
Mr. P. Borghys.

To Mr. Pritchard and Mr. Hooper—
Mr. C. M. Debenham.

To Mr. Kelsey Fry and Mr. Rushton—
Mr. R. W. Marston.

To Mr. Bulleid—
Mr. R. P. Hancock.

To Mr. Bull and Mr. Rix (Children's Dept.)—
Mr. F. McCombie and
Mr. J. E. C. Thorpe.

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Three Lectures on Clinical Problems

By T. B. Layton, Esq., D.S.O., M.S.

II.—THE DOMINATING LESION

(*a*) IN THE PATIENT

LAST week I envisaged you in a busy surgery or sick staff room faced with a large number of patients with whom you must deal in a limited amount of time, and I tried to point out to you that the clinical problem before you was to decide on the essential line of cleavage between groups of cases. To-day I want each of you to imagine himself by the bedside of a patient that is acutely ill; where you are faced with more than one lesion and have to decide which it is that dominates the situation at the moment.

I can, perhaps, best put this principle before you by recounting the first case in which I diagnosed mastoiditis in a child suffering from diphtheria. The medical officer and I went to the Superintendent, who was Dr. Goodall, an

old Guy's man of great clinical experience, and he asked me what I thought ought to be done. I said I thought we should operate on the child. He turned on me and bluntly shot at me this question: "Mr. Layton, will you guarantee that that child will die if you do not operate?" "No, Sir," said I, "certainly not." "Then," said he, "I will not have the operation done." In every case of diphtheria, even of moderate severity, there is an affection of the cardiac muscle in the early weeks of the disease which dominates over any other lesion for awhile. I want to illustrate this principle to-day not by different physiological systems, but by the relative importance of the various lesions that may occur in the respiratory system.

First let us spend a few minutes in summarising the functions of the larynx. We all think of it as the organ of song. Actually it is but a part of this. The whole column of air that lies above the larynx with its muscular surroundings takes a part in that wonderful phenomenon without which man's speech would have been a soulless gift to him. This function is, I think, a development of one that we already recognise in animals, whereby the voice is a part of the means by which we express our emotions. This is so engrained in our nature that we never have it entirely under our control. Neither of these is a vital function, nor one for which we first find it being evolved. There are also those functions of controlling expiration whereby the larynx has its part in all modifications of respiration such as coughing and sneezing, as well as in spitting and also in those other bodily functions which demand an increase of the abdominal pressure. Lastly there is the larynx as an organ of protection. There is the rapid reflex closure of the larynx which prevents the entry of a foreign body, and there is its function in the prevention of the spread of inflammation from the upper to the lower respiratory tract. It is this last that I want you to keep in mind to-day. I do not think it has been sufficiently recognised or adequately studied. It affords a physiological reason for our keeping separate the two specialties of the upper and lower respiratory tract; but because it lies at the junction of the two the conditions, clinical and anatomical, under which infections or inflammations cross this boundary have not been defined.

I think we can classify the clinical conditions under two main heads. Those where this protective barrier gives way suddenly in the course of an acute infection, and those where it gives way after much battering either by chronic disease of the upper respiratory tract or as the result of many slight—and at the time trivial—infections. It is with the acute infections that we are concerned to-day. I believe that those in which the defensive barrier of the larynx most often breaks down are the two epidemic virus diseases of measles and influenza.

When the laryngeal barrier has broken down our dominating lesion may be above or below it. Of those above it our dominating lesion may be the general inflammation of the mucous membrane of the upper respiratory tract or the local inflammation of one of the cul-de-sacs that open out of it. These may be grouped into two. The accessory sinuses of the nose and the middle ear clefts; and these two differ the one from another in that in acute inflammations of the former a spread of the inflammation to the meninges is very rare, and in the latter it is not uncommon. I think that the most important lesion of an inflammation of the respiratory system above the larynx is meningitis—or its threat—secondary to an involvement of the middle ear cleft. The other lesion that may dominate the situation is a septicæmia. Where the general symptoms of the inflammation of the mucous membrane of the upper respiratory tract ends and a septicæmia starts one cannot decide with any exactitude. Certainly not by the power of the bacteriologist to discover the organism in the blood stream, for that is handing over clinical medicine to technicalities. To sort out the symptoms of these various lesions would not be so difficult were it not for the relation of the lateral sinus to a portion of the bone that surrounds the mastoid antrum. By the invasion of this venous channel we have a route, alternative to the pharyngeal mucous membrane, whereby organisms can pass into the blood stream and so set up septicæmia. This route can be stopped by operative surgery by removing the factory of organisms from which invasion is occurring. We have here, then, a second lesion in the middle ear cleft which may become a dominant one.

This is a long introduction to our subject, but I think we are now ready to start. In certain diseases patients die from different lesions at different ages. We may call this the doctrine of the lethal tissue. It may cause an alteration in the dominance of the lesion according to the age of the patient. We see this well exemplified in measles. The small child in this disease dies of a bronchitis or a broncho-pneumonia. As children grow older there is no particular anxiety as to their lives from chest complications. At this age, however, a measles mastoiditis may very readily pass over into meningitis. In small children meningitis is not to be feared as the inflammation passes outwardly and forms a retro-aural swelling,

which may be incised pending an appropriate stage for the mastoid to be opened. When this is done it is surprising how often the patient recovers without further operation. I would say, therefore, that in the infant and the toddler the inflammation of the pulmonary tissues is likely to be the dominating lesion in a case of measles. There comes an age when doctors and mothers are no longer particularly anxious about the lungs in this disease, and I think it is the same in influenza. In the adult, in influenza, this fear of a lung lesion returns; and experience with young soldiers during the war makes me suspect that the same applies to measles in the young adult.

Let us leave the adult for the present to recognise an age above the toddler and including the young adolescent where the lethal tissue is the meninges and not in the chest. In measles at this age you must watch very carefully for meningitis in any case that is complicated by otitis media. Now this does not mean that in every case of otitis media in measles at this age you must diagnose mastoiditis. Remember that to-day it is not enough to diagnose mastoiditis, you have also to determine the right time at which to operate on it. In that way only will you approach the desired result of a dry ear in every case.

I think we have now gone as far as we can in the determination of the dominant lesion by the principle of the lethal tissue according to age. Remember, however, that these age limits are by no means rigid. That is why I have used such terms as toddler and adolescent rather than given you the figures of the years. The ages merge into one another. There is a very difficult period where the toddler and the school-child overlap, say from four to nine, in which you still have some anxiety for the chest, but have definitely become anxious about the mastoid region. There is no longer the same likelihood of the disease coming outwardly, because the suture between primitive parts of the temporal line that crosses the mastoid antrum has closed. Such a patient serves as a good text for the next stage of our discussion in the determination of the dominant lesion.

The first thing to decide is whether the inflammation has passed the larynx. In this the stethoscope will not help. You learn it by hearing a characteristic cough, which we usually sum up by saying, "The child is a bit chesty." Now do not go away and say that I scoff at the use of the stethoscope in these cases. If you can discover disease in the lungs with it, it is quite clear that these organs are competitors for the position of containing the dominant lesion. What I want to impress on you is that you cannot exclude the lungs from this position with the stethoscope. There may be quite an extensive inflammation of the mucous membrane of the trachea, the bronchi, and even of their larger subdivisions without it being possible to recognise any râles and rhonchi with the stethoscope, and get a characteristic sound to be obvious across several yards of space. I want to impress on you that this is not unscientific medicine. It is just the opposite. It is necessary to mention this because so many to-day think they are unscientific in their examination of a patient unless they are using some instrument. Consider, however, what a moist râle is. It is the characteristic sound of air passing a fluid as it is transmitted along a hollow tube. Its audibility and its note depend upon the lumen of the tube, the amount of fluid therein and the rate of passage of the air. Its persistence depends upon the continuity of the stream of air. We hear it as a high-pitched constant note in the hissing of a moist wood fire. By it we can tell whether we have properly dried the inside of a small syringe, such as that which we use for washing out the antrum. Both these râles are heard across space. We use a stethoscope to hear small noises in the smaller pulmonary tubes which are not so transmitted. Increase the lumen of the tube and keep the moisture and the current of air constant and the râles are no longer heard. Now increase the current of air as in coughing and they become obvious even to the untrained ear of the father or the cook. And that is what we mean when we say, "The child is a bit chesty." I make no apologies for going into these details of elementary medicine, because I am so often faced by a young doctor on the other side of the bed who carefully goes over the patient's chest with his stethoscope and then solemnly says, "No! there is nothing in the lungs," in a tone of voice which infers that it is up to me to find a complete explanation of all the symptoms in the area above the larynx; whereas I have heard sufficient from the child's cough as we approached the cot to warn me that there is enough below the larynx to account for a very considerable amount.

That is the first reason why I lay so great stress upon this question of the passage of the larynx. If you estimate the total mucous membrane of the trachea, the bronchi, and their larger branches, and add it to that of the nasal and pharangeal mucusa, there is a very considerable area from which there may arise those symptoms of absorption and reaction which are together summed up in the one word "fever." It is upon these symptoms that we very largely depend in deciding to open the acute mastoid to-day. And the second reason why I lay this stress is that the

presence of that tracheitis and larger bronchitis may be but a transient stage in the development of a bronchiolitis or broncho-pneumonia; and the very worst time at which to perform any operation on such a patient is in the acute invasive stage of these lesions. If a child were exposed to measles yesterday I should not mind operating upon the mastoid to-day, because I know that I should have a fortnight in which to get him over the operation before the spread of the measles passes the larynx. When the child has developed bronchiolitis or broncho-pneumonia and has begun to react and to improve, I do not much mind from a general point of view in rapidly opening the mastoid under gas and oxygen anæsthesia. And that brings me to my third reason for laying such great stress upon the passage of the larynx. When you perform a mastoid operation to-day it is not enough to save the child's life; you must also end up with a dry ear, and that depends primarily upon the perfection of your bone work. Now in the stage of bronchitis that is diagnosed by spatial auscultation, an anæsthetic results in an increased secretion, and that in a slight degree of cyanosis. This may be so slight that it is not recognisable by the anæsthetist, but it is by the surgeon, for it results in an increase of blood in the operation area; and this in an inability to see the bone cavity as well as one should; so that one cannot do the bone work as well as one wishes, and indeed as we must if we are to approach the ideal of one hundred per cent. of dry ears after all acute mastoid operations. And so you see that really the lung condition dominates the situation every time unless one or both of the complications resulting from extension of ear disease within the skull arises. As I have told you, these two lesions are meningitis and sinus invasion. Of meningitis as a dominant lesion I want to speak in my next lecture, and so here I will take sinus invasion as my example of a lesion from the inflammation of the middle ear cleft which dominates over any lesion in the lung. And first I would have you note my term "sinus invasion." I think it is time that we dropped the term "lateral sinus thrombosis." The thrombosis is but a result, primarily physiological, that may occur from varying pathological conditions in the mastoid region. I do not think these various conditions have yet been sorted out by anyone, and I do not propose to make the attempt here. One, however, is quite distinct from the rest. It is the invasion of the blood stream by the hæmolytic streptococcus by way of the lateral sinus which occurs in the acute stage of infections of the upper respiratory tract, and which is the anatomical reason for the high proportion of patients that develop septicæmia when these are complicated by an inflammation of the middle ear cleft. There is not necessarily any thrombosis, and in the early stage no change is seen on the wall of the sinus, but clinically it is a very definite happening. It is ushered in by a rigor. If you look this term up in the shorter Oxford English Dictionary you will find it defined as "a sudden chill, especially one accompanied with fits of shivering which immediately precedes certain fevers and inflammations." A rigor should be looked upon as a syndrome composed of many symptoms. All the symptoms may not be present, and one only may be observed, but in every case it implies some access to the blood stream of a foreign protein or an alteration in the blood stream of some bodies already there. In its typical form it is best seen in persons suffering from pyelo-nephritis; better, perhaps, in that even than in malaria. The subjective symptom is that of feeling cold, succeeded by a sensation of heat. The objective signs are, firstly, the shivering, a series of short clonic contractions of the muscles of the body, especially of the jaws and limbs. These are partly under the control of the will and do not result in any movements of joints sufficiently marked to interfere with the functions of the body. Secondly, there is a sudden and considerable rise of temperature. A sweating succeeds the syndrome; it is at this time or when the shivering stops that the sensation of cold is succeeded by one of heat. This sweating may be so profuse that large beads of moisture stand out from the skin all over the body and run together into large drops, that almost become pools in concavities such as that in the breast bone when the patient lies upon the back. The night-clothes are saturated and when removed have the consistency of the weekly wash when it has passed through the wringer.

Now the important thing in the rigors of sinus invasion is that the complete syndrome is seldom, if ever, seen. I do not remember a patient with the sweat. Actual shivering with the chatter of the teeth is rare, often the patient will deny feeling cold, and say they have merely felt a bit uncomfortable, or that they are feeling funny. On one occasion I have observed a transient suffusion of blue spread across the smaller vessels of a man's face when he felt thus. This had previously been observed by a nurse, who thought she had caused its disappearance by the administration of oxygen.

When we realise that for all patients it is hard to give a succinct description of subjective sensations when they are feeling ill; when we remember that with children this is impossible, and that with most patients such a description is inadequate

even when they feel fit, we are faced with the fact that the rise of temperature is in many cases the only evidence of the rigor.

This is what I want to impress upon you. In acute inflammation of the middle ear cleft a rocketing up of the temperature—unless otherwise explained—is evidence of sinus invasion, and should be considered as grounds for operative interference. This warrants further consideration. It is the suddenness of the symptom that is important. The sister of the ward or the nurse in charge of the patient may go away to her tea thinking that her bad case is doing very well and feeling that all question of operative interference is passed. She may return to find no apparent change in the patient and yet the whole situation may be so altered that operative interference may give the only chance of saving life. This sudden rise of temperature is most likely to occur in the late afternoon during the period that the normal variation of the temperature is at its height. Now this normal evening rise is not a sudden variation, and differs considerably in different people. Therefore the onset of the temperature of sinus absorption may not be as sudden as we used to think. If it were we should have to change our ward organisation when summer time came in and out. Perhaps if we took the temperature every half-hour from 2 p.m. we should find the rise going steadily on from then. We never do because we cannot say which is the patient that is going to get sinus invasion. Sometimes the nurse will tell you the patient has not been quite so well on that day. He has persistently taken less food or been difficult in the taking of fluids, but these are all the symptoms that you get of sinus invasion. I am confident that in a case of respiratory infection with a discharging ear when the temperature rockets up in the afternoon, the mastoid should be opened and the lateral sinus exposed, unless the symptoms can be explained in some other way. Further I do not think you are likely to get an alternative explanation in the adult, the adolescent, or even in the older child. I suppose in these an empyæma is a possible alternative, and yet it cannot be, for I do not remember a case where we had to decide between the onset of empyæma and a sinus invasion. An arthritis is a more likely lesion, but this does not occur in the patient where the temperature goes up like a rocket. It is more likely to be the patient with the temperature rising a little bit more every evening. In the small child, however, there is an alternative cause. Again it is the patient of an age where the toddler and the school-child overlap; and the condition that causes this sudden rise is one of acidosis. The diagnosis is made by the characteristic smell of the breath. I would implore each one of you to educate his hippocampal gyrus to recognise this smell before you go out into the wide, wide world. You will save lives thereby. Of our various senses that of smell is the one which needs least conscious effort to notice a physical sign, and to arouse the necessary association in the mind once this has been tuned to the impression. You all know how some smell may arouse memories of early childhood. In time to come some odour not experienced for many years will bring up memories of your student days, and perhaps will produce links in your mind which are absurd except for some occurrence of thirty years ago. Now you can make use in clinical medicine of this characteristic of the human mind, and the two smells that I would urge you to learn are those of acidosis and of diphtheria. The latter I have not got. I think it is more or less a chance whether you pick it up and associate it, but I suspect you may be able to teach it to yourself, and I have known dressers who have had it and who have been more accurate in their diagnosis than I am in the occasional case that comes up to the Out-Patient Department. Nor is there any need for cleverness in these observations. Those of us with ordinary brains can be just as expert as the ablest of our colleagues or our teachers—once we have the association in our minds. It is told how, in the days before there were house-physicians, the Apothecary, Mr. Stocker, going round the wards at night could recognise a case of fever—as he called typhus—in the dark, and often did so when the physician has been unable to do so in the day.

Not many of you will ever get the chance of learning the smell of typhus; probably but few of you will acquire the mental association in diphtheria; but every one of you ought to learn the smell of the breath of the acidotic child. If you know it you will be led to a correct conclusion with regard to many a sick child, and a totally different one from what you will if you are unable to recognise it.

Let me instance the case of a little child whom I saw during this recent influenza epidemic. I was asked to go and see him on a Wednesday. The onset of his influenza had been on the previous Friday. One ear had been affected on the Sunday, the other the evening before. I was to go and see him at 5 p.m. At 2 o'clock his temperature had gone up to 105° F. The child was chesty, nothing more. The doctor had suspected tenderness in one mastoid; I suspected it on the other. The problem was whether this temperature indicated sinus invasion, and whether we must operate that night. We had no guide as to the side; we had to open both mastoids if we did

anything. The child was not in a state to stand a careful double mastoid operation, and there was a good chance that one ear would not get well if we did the " get-in-quick-and-get-out-quicker " operation. We took him into Nuffield House. It was 9 p.m. when he got there. Although I was anxious about the condition, I am so impressed with the importance of not operating on a child late at night after all the emotions of such a day that I thought it better to leave him for the morrow. Next morning the acidotic smell was in his breath. Now this was the first time that I have observed this smell coming on some time after the rise of temperature. This had been taken on the previous morning when there was some pyrexia. At 2 p.m. it was 105° F. I saw the child at 5 p.m. I did not then notice the smell, and I am so accustomed to doing so without conscious thought that I do not think I should have missed it. Next morning it was obvious, and caused me to decide against operation. In the evening lung signs had developed sufficient to be recognised with the stethoscope. A fornight later one mastoid only was operated on and a dry ear was obtained. I want you to observe whether that sequence of pyrexia and smell is the rule. I have observed it in another child since this one, and I believe that in the attacks of acidosis the pyrexia precedes the smell in the breath by some hours.

That, then, is what I mean by the determination of the dominant lesion in the patient. You can apply this principle to any other acute disease of a general nature. There is a totally different clinical picture in another variety of acute infection of the upper respiratory tract of which scarlet fever is the type. The problem there is somewhat different. Meningitis is not so prominent, sinus invasion still holds the stage ; the general toxæmia of the primary pharyngitis is an important factor; glands may be enlarged and be the cause of all the symptoms ; nephritis and joint lesions are close round the corner. Remember that there is such a thing as scarlet fever without the rash. A good many of the cases of mastoiditis that we take into the general wards probably come under this group. I do not intend in these lectures to give a critical analysis of their symptomatology. In my third lecture I want to deal with the gravest of otitic complications, namely, meningitis, and to bring to your notice how a single lesion may not only dominate the situation in the patient, but also in the mind of the surgeon, and of a whole group of practising clinicians.

The Relation of Vitamin B_1 to Polyneuritis Occurring in Temperate Climates

A Paper read to the Physical Society by R. H. S. Thompson, Esq.

GENTLEMEN,—Before attempting to discuss the applications to clinical medicine of the recent advances in our knowledge of the function of Vitamin B_1 it will be well to give a short account of the recent biochemical developments that have been taking place in this connection ; and I think that it may add interest to the subject and, perhaps, weight to the conclusions, if some of the actual research methods that have been used to attack this problem are also shortly described.

The connection of Vitamin B with the carbohydrate metabolism of the animal body was first suggested by Funk[1] in 1914, who showed that the onset of polyneuritic symptoms in pigeons fed on a Vitamin B-free diet was accelerated when this diet was also rich in carbohydrates, and in the same year Braddon and Cooper[2] confirmed this by showing that a low carbohydrate diet delayed the appearance of the symptoms. These observations, which have since been confirmed on many occasions, may be taken as the starting point of the modern view of the functions of Vitamin B in the animal body, and for some years after this the evidence, although conflicting, weighed in favour of the view that the vitamin is in some way connected with the utilisation of carbohydrates by the organism. In more recent years this view has been consistently confirmed, and the modern conception is that Vitamin B_1 is an essential component of the enzyme system by means of which glucose is metabolised by the body cells.

Much of the work leading up to this conception has been done in Professor Peters' laboratory at Oxford, and it is on this aspect of the vitamin that I wish to talk first.

Among the earlier work leading up to this theory was that of Kinnersley & Peters[3] in 1929;

these workers estimated the amount of lactic acid in the brains of normal pigeons and of pigeons exhibiting opisthotonus due to prolonged feeding on a Vitamin B_1-free diet. The brains were removed from the living birds by means of a special T-shaped guillotine, and were plunged into liquid air within ten seconds of death; by this means post-mortem conversion of sugar present in the brain into lactic acid was minimised. These experiments showed that there was more lactic acid than normal present in the brains of the pigeons deficient in Vitamin B, and that this increase was not evenly distributed throughout the various parts of the brain, but was concentrated in particular in the optic lobes and lower part of the brain. In view of this uneven distribution of the excess lactic acid in the brain, Kinnersley and Peters argued that the accumulation of acid was not merely due to a general increase in blood lactic acid, but was due to the local production in those parts of the brain of abnormally large amounts of lactic acid. Thus was suggested the presence of a "biochemical lesion" in certain parts of the brain in Vitamin B_1 deficiency. It appears, however, that lactic acid also accumulates in other organs; thus Fisher[4] found that in the avitaminous pigeon lactic acid disappeared more slowly from the heart and muscles after exercise than in the normal animal, and some Japanese workers[5] have also shown that in patients suffering from beri-beri the blood lactic acid remains high after exercise for an unusually long period, so that it is possible that the biochemical lesion in Vitamin B_1 deficiency is more widespread than was at one time thought, although it is in the brain that it first becomes apparent.

A possible explanation of this increased lactic acid content of the brain was that in the absence of Vitamin B_1 the oxidative removal of the lactic acid was impaired. The next step was therefore to compare the amounts of oxygen consumed in a given time by normal and by avitaminous brain cells respiring in vitro. As much of the recent evidence regarding the function of Vitamin B_1 has been obtained by means of these measurements of the oxygen consumption of living cells, I think that a short account of the methods by which these measurements are made will not be out of place. The essence of these micro-respiration experiments in vitro is as follows: samples of the tissue to be investigated are quickly removed from the body immediately after killing the animal and are then divided up in such a way as to bring each cell into reasonably intimate contact with the respiring medium—that is, a fluid of suitable hydrogen ion and salt concentration, replacing, in fact, the actual tissue fluids in which the cells are bathed in vivo. Warburg and many of the other workers on the respiration of cancer cells have used thin slices of the tissue for this purpose, the extreme thinness of the slices facilitating the respiratory exchanges of all the cells of the slice. In working with pigeon's brain tissue, however, it was found that better duplicate values for the oxygen consumption of the tissue could be obtained if, instead of using slices, the brain tissue was teased with a blunt bone spatula. The minced tissue is then divided into amounts each weighing approximately 100 mgms., and these aliquots are then placed in special Barcroft microrespiration bottles, previously weighed and containing 3 c.c. of sterile Ringer solution accurately buffered to pH 7.4 with potassium phosphate. The exact amount of brain tissue present in each bottle is obtained by reweighing the bottles. Rolls of filter paper moistened with 40 per cent. sodium hydroxide to absorb the CO_2 produced by the respiring tissues are placed in special containers inside the bottles. The bottles are next connected up with special manometers and the entire apparatus evacuated and refilled with oxygen. The apparatuses are then placed in a bath at 37° C. and continuously shaken for three hours. During this time the tissue is respiring and absorbing oxygen; the carbon dioxide that is evolved is absorbed by the sodium hydroxide, so that the differences in gas pressure in the bottles recorded by the manometers is a measure of the oxygen consumption alone of the tissues.

By experiments of this sort it was shown[6] that there was no significant difference between the rates of respiration of normal and avitaminous brain tissue when respiring in vitro in a Ringer-phosphate solution. Under these conditions, however, the tissue is utilising for its oxidative processes merely those substrates which were present in the brain substance at the time of death. But if suitable oxidisable substances are now added to the respiring medium in the bottles, certain very definite differences are revealed in the biochemical behaviour of normal and avitaminous brain tissue.[7] [8] Briefly summarised, these differences are as follows: when respiring in a Ringer-phosphate solution to which glucose, sodium lactate or sodium pyruvate has been added, avitaminous brain tissue shows a much lower rate of respiration than does normal tissue. In the presence of succinic acid, however, the rate of respiration is unaltered. This is important, as it shows that the biochemical lesion in the avitaminous brain is a specific one, being intimately connected with the oxidation of the sugars and not connected with the general oxidations of which the cells are capable.

It might also be mentioned here that the narcotics show a similar specificity inhibiting the oxidation of lactic acid, but not of succinic acid.[9]

But if pure crystalline Vitamin B_1 be now added to the Ringer-phosphate solution containing glucose or lactic acid in which the avitaminous brain is respiring, the lowered respiration of the avitaminous tissue is restored almost to the normal level. This shows that this defect in the oxidation of glucose by the avitaminous brain tissue is a true effect of the Vitamin B_1 deficiency and is not due to any accompanying inanition of the animals during their period of feeding on a Vitamin B-free diet.

This effect of the vitamin in restoring to the normal level the lowered respiration of the avitaminous brain is known as the catatorulin effect, and it has been shown that there is a definite relation between the magnitude of the catatorulin effect and the amount of the vitamin producing it.[10] Thus, under the experimental conditions outlined above, as little as 1/10000 mg. has a perceptible effect on the rate of oxygen uptake, and 1/500 mg. is maximal. Moreover, the effect is so regular that these experiments have been developed into a highly satisfactory method of estimating the vitamin.

The minute amounts of vitamin that are required to show this effect indicate quite definitely that Vitamin B_1 is a catalyst, since the extra oxygen consumption that is induced by the addition of the vitamin is far too great to be accounted for merely by the oxidation of the added vitamin.

From these experiments it was concluded that Vitamin B_1 was in some way concerned with the oxidative removal of lactic acid in brain tissue. The position with regard to its function in the other tissues of the body was, however, far from clear. Many workers, in many different countries, had compared the oxygen uptake of normal and avitaminous muscle, liver, heart and kidney tissue, but the results of these investigations were confusing and contradictory, some workers maintaining that, as in brain tissue, these tissues also showed a defective rate of respiration, and other workers maintaining that there was no difference from the normal. In view of these divergent results an attempt was made to settle the question by a more specific method, namely, by determining whether pure crystalline Vitamin B_1 showed any catatorulin effect when added to respiring avitaminous muscles, liver, heart and kidney,[11] and it was found that the only tissue, other than brain, in which Vitamin B_1 showed a catatorulin effect is kidney tissue; this is of interest in view of the œdema associated with the "wet" type of beriberi, and reference will be made to this point later.

The absence of any catatorulin effect in liver, muscles and heart tissue is not at present easy to understand. It may be that the vitamin requirements of these tissues are not as great as those of brain and kidney, so that, although the degree of avitaminosis is sufficiently great to produce nervous symptoms in the living animal and a decreased oxygen consumption of the brain and kidney in vitro, it is not great enough to show any biochemical effects in the other tissues, so that an in vitro catatorulin effect is not obtained. But further work is needed before a definite conclusion on this subject can be reached.

The next step was the discovery of the connection of the vitamin with the removal of pyruvic acid by the brain cells. Pyruvic acid is a 3-carbon atom acid having two hydrogen atoms less than lactic acid, that is, having a CO group instead of a CHOH group. It can readily be detected by means of a colour reaction (Simon and Piaux), which is really a modified Rothera reaction, a bluish-green colour indicating the presence of pyruvic acid. Using this test Peters and Sinclair[12] in 1933 had shown that avitaminous brain tissue which has respired in the presence of lactate gives a strong reaction for pyruvic acid, while normal brain gives no reaction. Moreover, the addition of the vitamin to the avitaminous brain respiring in the presence of lactate reduced the intensity of the pyruvate reaction. This seemed important, for here was a substance which appeared to accumulate in the absence of the vitamin, and to disappear on addition of the vitamin. The pyruvic acid formed during the respiration of the avitaminous tissue was therefore estimated by a more accurate chemical method, and was further identified chemically by the preparation and isolation of its 2 : 4-dinitrophenyl-hydrazone,[13] and these more exact methods confirmed the findings with the colour reaction, namely, that during the respiration of avitaminous brain tissue pyruvic acid accumulates in relatively large amounts, and that on addition of the vitamin this accumulation is very largely removed; normal brain tissue, moreover, shows no such accumulation of pyruvic acid.

From this work it was concluded that Vitamin B_1 is concerned not directly with the oxidative removal of lactic acid but with that of pyruvic acid. This seemed to us to be of particular interest, since, at just about the same time that this work was in progress, Meyerhof,[14] working at Heidelberg, had shown that pyruvic acid was a normal intermediary in the carbohydrate metabolism of the animal body.

It next seemed to be of interest to determine whether pyruvic acid accumulated also in the

blood of animals fed on a Vitamin B_1-free diet, since, if such an accumulation could be detected, it was conceivable that it might be of use as a clinical test for Vitamin B_1 deficiency. Once again pigeons were used first as experimental animals, and it was found[15] that those birds which showed nervous symptoms due to prolonged feeding on a Vitamin B_1-free diet showed also a large increase in the pyruvic acid content of the blood. In order to correlate this difference specifically with the vitamin deficiency, and to meet the obvious criticism that the raised blood pyruvate might be due to the accompanying starvation of the animals, estimations were also made on the blood of birds which had developed opisthotonus, but which had been cured by the administration of pure Vitamin B_1. These estimations showed that the blood pyruvate returns to a figure only a little above the normal (and not statistically different from the normal) after the nervous symptoms have disappeared on dosing with Vitamin B_1. It was concluded, therefore, that the increase in the pyruvic acid of the avitaminous blood was a true specific effect of the avitaminosis, and was not merely the result of any accompanying starvation.

The same results were obtained with the blood of normal rats and of rats in acute Vitamin B_1 deficiency.

The next step was, therefore, to investigate this in human subjects with a view to developing the level of blood pyruvate as a test for Vitamin B_1 deficiency. One immediate difficulty in the way was, however, the unfortunate rarity of cases of beri-beri in this country. However a series of normal human subjects, mostly students, was investigated[16] and the normal level of pyruvic acid in the blood was established. It was interesting to note that the normal level in man was extremely close to that of pigeons. A small series of hospital patients, including some whose conditions were suggestive from the point of view of their symptomatology of a Vitamin B_1 deficiency, was also investigated, but no true evidence of a raised blood pyruvate was obtained.

About nine months after the completion of these investigations, however, a paper appeared in the *Quarterly Journal of Medicine* from two workers in Shanghai[17] in which they gave a full account of the application of this test to cases of beri-beri. In cases of fulminating beri-beri, which, in the opinion of these workers constitutes the nearest approach to pure Vitamin B_1 deficiency, a very considerable increase in the blood pyruvate over the normal level was found, and pyruvic acid was also found in the urine and cerebrospinal fluid. In mild subacute cases of beri-beri, however, the blood pyruvate was not significantly different from the normal, but it must be remembered that in such cases the clinical manifestations are in all probability due to a combined A and B_1 hypovitaminosis, so that the biochemical disturbances in the body fluids are not those of a pure B_1 deficiency.

These alterations in the chemistry of the body fluids, while of possible importance for confirming the presence or absence of beri-beri when associated with other diseases, are also of considerable interest in connection with the ætiology and symptomatology of beri-beri, although they stand in imminent danger of a common misinterpretation, namely, the assumption that the increased amounts of pyruvic acid in the blood are responsible for a toxæmia to which all the symptoms are ultimately due. Ever since the first description of vitamin deficiency diseases there has been a tendency to regard the production of disease by a mere absence of a dietary factor of no calorific importance as an illogical and improbable hypothesis, and the suggestion has been repeatedly put forward that the signs and symptoms of the disease must be due to the positive accumulation in the body of some toxic substance which, in the presence of the vitamin, would have been neutralised. Now the presence of increased amounts of pyruvic acid in the blood in Vitamin B_1 deficiency has been described, and the question once more arises : Is this the toxic substance responsible for the diseased condition ?

Experimentally there is no evidence that pyruvic acid, in the quantities in which it is found in the blood in beri-beri, is toxic, and I think that on theoretical grounds also there is no necessity for the assumption of any toxic agent. By the mere absence of the vitamin the metabolism of glucose is interrupted and the nerve cells fail to function properly. As Peters[18] has recently pointed out (1936), the symptoms of Vitamin B_1 deficiency in pigeons may be produced by other circumstances, most of which involve a disturbance of the metabolism of glucose at some stage. Among such conditions may be mentioned asphyxia, insulin overdosage, poisoning by cyanides and anæsthetics such as chloroform. As has already been mentioned, Quastel has shown that narcotics inhibit the oxidation by the cells of lactic acid to a much greater extent than the oxidation of succinic acid, in the same way as does the absence of Vitamin B_1 ; in the one case the causative agent is the presence of an inhibitor of the enzyme system, and in the other the absence of an essential part of the enzyme system.

It must be remembered also that this accumulation of pyruvic acid in the blood is not the only

alteration in blood chemistry in Vitamin B_1 deficiency. As long ago as 1914 Funk and von Schönborn[19] showed that polyneuritic pigeons exhibited hyperglycæmia ; it has since been shown by more carefully controlled experiments[20] that this is not a specific effect of the avitaminosis, but is due to the accompanying inanition brought about by the loss of appetite. Again, in severe cases of beri-beri a high level of non-protein nitrogenous substances in the blood has frequently been observed. The exact cause of this is not yet known, but the kidney, as already mentioned, has been shown to be the only organ other than brain which, when obtained from a polyneuritic animal, shows a lowered rate of oxygen consumption and the restoration of this almost to the normal level on addition of Vitamin B_1. It may well be that this renal defect helps to explain the retention of non-protein nitrogenous substances in the blood as well as the derangement of water balance which leads to the œdema present in so many cases of beri-beri, although in the production of the latter it is probable that the cardiac lesion also plays a part.

Coming now to the more unsure ground of clinical medicine, there is a tendency among many to regard Vitamin B_1 deficiency in this country in particular and in temperate climates generally as of little importance. It is true that well-marked cases of beri-beri are in general limited to the rice-eating populations of the East, but more and more evidence is accruing that many forms of hitherto unexplained neuritis may be due to a B_1 hypovitaminosis. From the point of view of clinical medicine one of the most important points that has emerged from the recent work on the vitamins is the realisation that vitamin deficiency diseases may be produced not only by the ingestion of a vitamin-deficient diet, but also by a failure to absorb the vitamins from the gut ; even if the diet has an adequate vitamin content it is possible under certain circumstances to be described later, that there is a failure of absorption of the vitamins to a sufficiently great extent to produce symptoms and signs of disease. Pernicious anæmia is now well recognised as a deficiency disease—the result of failure of formation by the stomach of the " intrinsic factor " necessary for normal hæmopoiesis—and Witts[21] has pointed out that the other macrocytic anæmias such as those associated with dibothriocephalus latus infection, coeliac disease, sprue or following extensive intestinal resection are probably caused by a failure of absorption of the essential hæmopoietic elements.

A similar state of affairs exists with regard to Vitamin B_1 ; that is to say, symptoms of deficiency of this vitamin may be caused either by an incomplete diet or by deficient absorption of the products of digestion of a complete diet, or by the operation of both factors simultaneously.

The first condition occurring in temperate climates which calls for consideration from the point of view of a Vitamin B_1 deficiency is alcoholic polyneuritis. The symptomatology of this condition bears very striking resemblances to that of the " dry " form of beri-beri ; perhaps I can illustrate this best by quoting the original description of a case recently investigated by Roscoe :—[22]

" The patient, 53 years of age, had for years consumed moderate amounts of alcohol, at times as much as a pint of whisky a day, but usually not more than two or three pints a week. For years he had eaten irregularly, sometimes taking practically nothing but a pint of whisky daily, during several days, as his apparent source of calories. It was impossible to determine any regular dietary habits. Recently his appetite had been very poor. There had been no prominent gastro-intestinal symptoms, but there was marked decrease of hydrochloric acid in the stomach contents.

" A month before entry he noted tenderness of the calves of the legs and sensations as of pins and needles in the feet. At that time progressive ' weakness ' of the legs began. Examination on entry to the hospital showed definite but not severe signs of ' alcoholic ' polyneuritis. Strength was diminished in the legs and feet. The gait was ataxic on a slightly broad base. Knee jerks were diminished and ankle jerks were absent. Babinski's sign was not present. The calves were markedly tender on pressure. There was slight hyperæsthesia of the soles of the feet. Vibration sense was moderately diminished, but position sense was apparently normal."

The salient features of the disease are, then, progressive weakness, particularly of the legs, pain, deep tenderness, hyperæsthesia of the skin and diminished or absent tendon reflexes. The chronic gastritis that accompanies chronic alcoholism leads one to suspect a possible connection between this condition and a deficient absorption of Vitamin B_1. Minot, Strauss and Cobb[23] have recently investigated a series of 57 cases of alcoholic polyneuritis ; gastric analyses were done on 43 of the cases, and of these only 7 showed a normal amount of hydrochloric acid in the gastric secretion ; 15 secreted distinctly diminished amounts, and 21 secreted no free acid at all. Figures from other workers, moreover, suggest that the incidence of hypochlorhydria and achlorhydria in chronic alcoholics showing symptoms of polyneuritis is greater than in those cases showing no neurological symptoms.

Now, although Vitamin B_1 is resistant to hydrolysis with acids, it is readily inactivated by alkalies even at low temperatures, and, in addition, the sensitivity of the vitamin to alkalies is much increased in the presence of alcohol.[24] It is conceivable, therefore, that, in addition to the scanty diet, apart from alcohol, of the chronic alcoholic there is an inactivation of whatever Vitamin B_1 may be in the diet occurring in the small intestine as the result of the achlorhydria. The recent therapeutic application of Vitamin B_1 to alcoholic polyneuritis has further substantiated the hypothesis that the nervous symptoms are due to a Vitamin B_1 deficiency. Many workers have treated series of cases with Vitamin B_1, and the results have been uniformly good, although, as Minot has pointed out, accurate assessment of therapeutic results in such a chronic condition as alcoholic polyneuritis involving, as it does, the regeneration of nerve tissue is difficult and dangerous. Perhaps the most striking series of cases is that investigated by Strauss[25], who allowed ten patients suffering from well marked alcoholic polyneuritis to continue their customary daily intake of alcohol on condition that they consumed a well-balanced diet rich in vitamins; to obviate any errors from defective absorption consequent upon chronic gastritis they also received Vitamin B_1 concentrates and liver extracts by parenteral injection; definite improvement in the polyneuritis occurred in every case.

It appears, therefore, that the polyneuritis associated with certain cases of chronic alcoholism may not result primarily from a neurotoxic action of the alcohol, but may be due to a Vitamin B_1 deficiency conditioned in part possibly by disturbances of gastro-intestinal function.

If this is so it might be asked whether neurological symptoms occur in other conditions involving gastro-intestinal upset. Dr. Douthwaite,[26] in a recent article in the *British Medical Journal*, has described seven cases of what he has called "gastrogenous polyneuritis." Each of these cases presented symptoms of severe polyneuritis in association with some gastric lesion; gastric analyses performed on five of the cases showed that in four of them there was no free hydrochloric acid in the gastric contents, while in the fifth free acid was present in the half-hour specimen only when it rose to 0.036 per cent.; gastric analyses in the other two cases are not recorded, but at necropsy the diagnosis of carcinoma of the stomach was confirmed in both instances. It is tempting to wonder whether the polyneuritis present in these cases might not also have been due to a Vitamin B_1 inactivation consequent upon the gastric anacidity.

Of particular interest in this respect is the recent unpublished work of Meiklejohn,[27] who has measured the Vitamin B_1 content of the blood of a case from Dr. Ungley of pyloric stenosis with polyneuritis; the technique[28] consists of the measurement of the growth rate of a small mould, Phycomyces blakesleeanus, the growth of which is specifically catalysed by minute amounts of Vitamin B_1; by this means he was able to show that the blood from this case had a Vitamin B_1 content much below the normal level, so that if these results can be repeated on other cases of a similar nature a valuable piece of evidence will have been obtained in favour of the view that the nervous symptoms of such cases are due to a B_1 avitaminosis.

Any consideration of concurrent neurological and gastric symptoms naturally brings one to the question of subacute combined degeneration. The relation, if any, that Vitamin B_1 bears to this condition is still to be decided. Castle and his co-workers[29] in America have, however, produced experimental lesions in dogs bearing a striking resemblance to those found in subacute combined degeneration by causing a chronic Vitamin B_1 deficiency as opposed to the acute avitaminosis, the symptoms developing between the 60th and 80th days. Mellanby[30] on the other hand favours the view that the lesions of subacute combined degeneration are in some way connected with a Vitamin A deficiency, although he observes that "there are outstanding differences in the distribution of the degenerative changes" found in his experimental animals as compared with the human lesion.

Another neuritic condition in which recent therapeutic success with Vitamin B_1 has been obtained is the so-called toxic polyneuritis of pregnancy,[31] and it has been suggested that the condition is due to a B_1 avitaminosis produced by severe vomiting. It appears, therefore, that several forms of polyneuritis, hitherto described as toxic in origin, are in reality due to a deficiency in the body of Vitamin B_1, and it seems possible that other forms of neuritis may also be due to this cause. Thus, Vorhaus, Williams and Waterman[32] have recently treated 100 random cases of neuritis with pure crystalline Vitamin B_1; they classified these cases as follows: 20 cases of polyneuritis of infective origin, 41 cases of so-called metabolic polyneuritis, 22 cases of localised neuritis, 11 cases of neuritis associated with anæmia, 3 cases of neuritis associated with pregnancy, and 3 cases of suspected advanced Vitamin B_1 deficiency. Only 8 per cent. of these cases failed to react favourably to treatment, 44 per cent. became entirely symptom-free, and 48 per cent. were

definitely improved. Of the three cases of pregnancy neuritis all were rendered entirely symptom-free.

More work is obviously needed along these lines before any definite conclusions as to these more ill-defined types are reached, but at the same time these results are suggestive. Adequate dosage with the pure crystalline vitamin and not with preparations containing unknown and varying amounts of the vitamin is needed, as the therapeutic response to Vitamin B_1 is often the main diagnostic test in the more obscure forms of Vitamin B_1 deficiency.[32]

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Reviews

Who'd be a Doctor? By ANTHONY WEYMOUTH. Published by Messrs. Rich & Cowan. Pp. 340. *Price* 8*s.* 6*d.*

THIS is a really bad book. Remarks have been made before in these colums on the possible reasons for the rapture with which books by doctors have lately been received by the public; one supposes that it is possible even for this book to have a certain sale, though it seems specially designed for a long life on the second-hand bookstalls.

The author tells of himself that he was a medical student at St. Thomas's Hospital, which he left as soon as he was qualified, to become a house surgeon at a provincial hospital. After a year or so of various "*locums*" he appears to have set up in London, where, apart from a period in France during the war, he has remained in practice as an alienist.

It is a very ordinary story, and might have been written by any doctor of twenty years' standing or less, with the difference that most would probably have written it better. There is a number of anecdotes, some of which are chestnuts and some of which are cheap; there is a sprinkling of sentimentality and a little moralising of the most superficial order. We are left with no conception of the writer himself, and there is hardly an episode vivid enough to impress itself upon one's memory, unless it be that in which, while talking to the Matron of a Nursing Home, the author saw the last patient whom he had visited pass the window under the influence of gravity.

The author might possibly have passed himself off as a sort of medical Beverley Nichols were it not for the fact that the writing is intolerably slipshod. The manner is reminiscent of the saloon bar late on a Saturday night, with a certain

good-fellowship and a leaning to the sentimental, but it does not stand up well to the colder scrutiny of a Monday morning. We are treated in the book to such phrases as " ga-ga " and " bats," and are told that the blood pressure " was all over the place." There is a chapter on slips of the tongue, headed, strangely enough, " *lapsi linguæ* "; one is left in doubt as to whether this is meant as a kind of joke or not.

In fact, this book depressed us; it is perhaps best described by the adjective " shoddy."

Hinc calami lapsus, hinc, hinc procul este profani.

M. P.

Modern Discoveries in Medical Psychology. By CLIFFORD ALLEN, M.D., M.R.C.P., D.P.M. Published by Messrs. Macmillan & Co., Ltd. Pp. 280. *Price* 8*s.* 6*d.*

THIS is a pleasant book, but one rather doubts its value. It is a serious work, devoted to Psychology and all that, and intended for the intelligent layman, the general practitioner who happens to be interested, and the medical student with tendencies to psychiatry. It is awkward for a reviewer to confess that he finds the first chapter the most interesting, but that is the case; the book opens with a history of the development of hypnosis, and a very good account it is. The development of our ideas on the nature of the conscious and unconscious is then followed through Janet and Freud to Adler and Jung, with a diversion on Dr. Morton Prince's famous case of Sally Beauchamp; and ends (apart from a chapter on the machinery of the mind according to Pavlov) with an exposition of the work of Kretschmer.

Freud, not unnaturally, receives the greatest measure of admiration, followed, perhaps, by Janet and Kretschmer; Adler meets with some keen criticism, and Jung receives some hearty buffets. But Dr. Clifford Allen has presented an honest summary of the position which he feels each holds.

The brevity of the book leads occasionally to generalisations which, as they are expressed, seem sometimes a little surprising, as when the author dismisses the relation between homosexuality and glandular dysfunction in a few not very logical lines. That is not to say that his conclusions are unscientific, only that they are unscientifically expressed.

Again, his analyses of the characters of Shelley, Robert Mayer, Robespierre and Gaudier-Breszka are unduly brief if any value is to be gained from them, and the rather sudden quotations from eminent writers and their translations into simpler language are sometimes a little incomprehensivle owing to their lack of context, for such matter is only with great difficulty susceptible of condensation.

It is a remarkable feat to have covered so much in less than three hundred pages, but one feels that the clarity of the subject matter has suffered correspondingly. It is none the less a book which can be read with a measure of profit in a relatively short time.

M. P.

Notice

Guy's Hospital Medical School

THE ADRIAN STOKES MEMORIAL FELLOWSHIP

Applications are invited for nomination to the Afrian Stokes Memorial Fellowship. The Fellowship is open to duly qualified Medical Practitioners or Graduates in Science in Pathology or Bacteriology.

Applicatns must not be more than thirty years of age and must be anxious to carry out further study in Patholody or Bacteriology in any of their branches.

The Adrian Stokes Memorial Fellow is required to carry out this study during a period of not less than six calendar months in his year of tenure, at a University, School or Hospital or other institution, subject to the approval of the School Council, except the School in which he has received his medical or scientific education. The Fellowship is of the value of approximately £300.

Application for nomination to the Fellowship must be lodged with the Dean, Guy's Hospital Medical School, London Bridge, S.E.1, not later than April 23rd, 1937.

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The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

"NICK"

Guy's Hospital Dental Society Dinner

THE evening of Saturday, the 6th of March, saw the thirty-eighth Annual Dinner of the Guy's Hospital Dental Society at Grosvenor House. Guy's men, past and present, were very well represented, and the company was honoured by a large number of distinguished visitors representative of the Dental Schools in Great Britain, making a most notable gathering of the dental world.

After a very excellent dinner and the Royal Toasts proposed by our President, Mr. Martin A. Rushton, we settled back in our chairs for the speeches.

Surgeon-Captain E. E. Fletcher proposed the health of Guy's and the Schools. Mr. H. L. Eason replied on behalf of the Hospital. He said that the public were demanding a great many more dental surgeons than were at present qualifying from the hospitals every year, and that this position would be aggravated by the large number of "1921" men retiring within the next ten years. This critical situation was only to be met by an expansion of our dental schools—at present one-fifth of the dental surgeons qualifying every year in the British Empire came from Guy's—or a shorter course and a lower standard, a project much to be deprecated. It was with profound regret that we learnt of Mr. Eason's impending retirement. When he goes the profession will lose a man, unique as practitioner, organiser and advocate, and our own dental school will lose a staunch ally. Mr. F. N. Doubleday replied for the Schools.

Mr. R. E. Rix toasted the Visitors in a short but amusing speech, which was responded to by Professor H. F. Humphreys, of Birmingham.

Professor H. B. Fenn then proposed the health of our President, describing him in classical terms. Mr. Rushton modestly refuting this eulogy, went on to say how much we owed to our Secretary for the work he had done to make the Dinner a success. This was ably replied to by Mr. Paul Borghys, who, with the support of the microphone, was able to tell us that, although he had not achieved the aim of every secretary—a record number at the Dinner—he was very pleased to see over four hundred present.

In the intervals between the speeches we were amused by some very good entertainers. Mr. Arthur Askey, Shanklin's chief jester, was the first to appear, and he kept his audience—at this stage very appreciative—rocking nicely. Later, Bennett and Williams entertained us with some very witty cross-talk, but perhaps their sparkling patter was a little too quick for our bemused higher centres to follow at this stage of the proceedings. Finally a popular wireless favourite, Mr. Leonard Henry, concluded the entertainment with some up-to-the-minute humour about gas masks and dictators. Over later events during the evening a "vale" is best drawn.

The very enjoyable evening which we all spent was in great part due to the highly efficient manner in which the Dinner was organised, and great credit for this must go to our Secretary, Mr. Borghys.

P. E.

Correspondence

Psychological Phenomena

To the Editor of the GAZETTE

SIR,—It is with some reluctance that I reply in a merely controversial manner to Professor Burridge when he announces his successful prediction of two recent discoveries by Prof. Adrian. But no man can be expected to take an alleged emendation of his facts lying down, as it were, if it still appears that his facts have been correct and the emendation wrong.

Professor Burridge says that I had erred in stating that accurate prediction is still as a rule impracticable in psychology, and he claims to have made "predictions concerning psychological phenomena." I am afraid that he has done nothing of the kind. His first prediction makes a statement about "mind." Professor Adrian's verification is a statement made more cautiously about "brain." In tacitly equating these two entities Professor Burridge ignores the still burning problem of the relationship of mind to body, and so begs the whole fundamental question. It is admitted that prediction is very often possible in physiology. But Professor Burridge in this and in his second instance from Professor Adrian has not made a psychological prediction. He has not even made a physiological one. What he has done has been to make a prediction about physiological *discovery*; and in that we all congratulate him.

Yours, etc.,

R. D. GILLESPIE.

16, Chester Terrace,
Regent's Park.

Empyema Signs in Children

To the Editor of the GAZETTE

SIR,—During the twelve years since I qualified and thus became a perpetual student of Guy's Hospital, I have learnt many new facts, a few examples of which are: The occurrence of uræmia in gastric obstruction; of coma in spontaneous subarachnoid hæmorrhage, and of the illness of infection in measles. But these are uncommon phenomena compared with what I may call the most important thing I have learnt since qualification, which is, that empyemata in children is often accompanied by practically identical signs with that of pneumonia.

In 1926 Dr. Herbert French gave a clinical lecture (which I believe you published) on "Physical Signs in the Chest," and for the first time I learnt the reason for the signs, instead of the fact that certain signs accompanied certain conditions. He pointed out that the signs of fluid were also the signs of solidification, and depended on the condition of the underlying lung. My object in going into what I consider the correct interpretation of the signs is that I have met in the hospital to which I am attached many qualified men and others who doubt the existence of an empyema because the breath sounds are heard, or who cannot explain the signs and give such varied reasons that fluid is a good conductor of sound if it is under pressure and a bad conductor if it is not.

The essential difference between a child's lung and an adult's lung is its power to collapse. This can be easily verified in the post-mortem room. In the body a child's lung will collapse almost completely before the mediastinum moves to the opposite side, and if the stethoscope could be put on the surface of such a lung, bronchial breathing and the breath sounds would be transmitted through it because it is solid lung; and as fluid is a good conductor, these sounds are heard at the surface. The pitch is usually lower and ægophany is often heard. The adult's lung fails to collapse completely, the mediastinum is shifted, and the breath and voice sounds are not conducted through the spongy tissue. Skodaic resonance is heard over it. Normally the sounds are conducted along tubes containing elastic tissue on tension, but with partial collapse this tension is lost, and it is impossible for a note to be conducted, just as it is impossible to get a note from a slack violin string. No sounds reach the surface of the lung, and therefore none are conducted through the fluid.

The practical aspect is that a child may harbour an empyema too long. The temperature chart is an almost infallible guide to the correct diagnosis if it is available for the whole course of the illness. I have not yet seen an exception to the rule that if the temperature in a pneumonia falls to normal and remains so for forty-eight hours an empyema will not occur. The character and distribution of the dullness helps; the X-ray and the needle are accessories.

Several of those who, like myself, failed to realise these points, were Guy's men doing their first resident appointment. Perhaps it is another argument for more thorough training in the Children's Department, where, during two years' work there, I often heard Dr. Cameron point out the facts I have tried to detail.

Yours, etc.,

R. E. SMITH.

3, Horton Crescent,
Rugby.

Sport

Rugby

Guy's v. Bedford

GUY'S visited Bedford on Saturday, March 13th, and, after putting up quite a good fight before the interval, they were overplayed in the later stages of the game and were defeated by 4 placed goals and 2 tries (26 points) to a penalty goal (3 points).

The home side did extraordinarily well to win by such a handsome margin, as they had five of their regular fifteen assisting the East Midlands as well as three other absentees on account of illness.

Guy's controlled the scrums in the early stages, but when the Bedford pack settled down, Quarry sent out some splendid passes to Coleman, who repeatedly carved out some glorious openings for his threes.

Prigmore, Power and Scrivener participated in some attractive passing, especially in the second half, when the Hospital defence could do little to stop them.

After ten minutes' play Guy's took the lead when Kark kicked a neat penalty goal, but the home team promptly replied when the forwards backed up splendidly in a dashing raid which enabled Kelly to touch down for a try, and Previte added the goal points.

A spell of even play followed, but a bout of passing by the Hospital back division was intercepted in midfield by Power, who broke through

the centre and sent Prigmore racing down the touch-line for a spectacular try.

After the interval both teams made great efforts to open up the game and play was far more interesting to watch. Within two minutes, Coleman took the Hospital by surprise when he cut clean through the centre to score a try in the corner, and Previte placed another good goal from near the touch-line.

Bedford continued to have the advantage, and, following a delightful round of passing between Coleman, Power and August, Prigmore dribbled over, but Halamandres beat him for the touch-down.

Guy's were now beginning to tire, and Bedford were having matters much their own way.

After Prigmore had found touch with a long kick, Scrivener cut through and scored behind the posts for Previte to convert.

However, the Hospital made a great rally towards the end, but Power saved and the Bedford forwards swept down the field in irresistible style and nearly succeeded by sheer force. Van Steytler managed to get back and clear, but Eidsforth came up with the threes and created an ideal opening for Power, who ran in between the posts and Previte added his fourth goal.

The Hospital were now compelled to concentrate on defence, but they failed to keep out Prigmore in the last minutes, who scored another try, which was not converted.

Team.—C. Halamandres; A. B. Baxter, R. D. Allen, J. van A. Steytler, P. H. Birks; J. W. Crawford, J. W. Lewis; H. H. Crabb, E. S. Nicholson, M. R. Kark, A. Forbes, I. G. Robin, P. letcher, C. S. Darke, F. Walt.

Guy's v. Old Paulines

AT Honor Oak Park on Saturday, March 20th, Guy's played their last home match of the season, and after a very interesting game the Old Boys proved worthy winners by a placed goal, a penalty goal and 2 tries (14 points) to a penalty goal (3 points).

The Hospital were not quite at full strength, as both R. C. S. Dick and Ian Robin were unable to turn out; otherwise they fielded the team selected to meet St. Mary's in the Hospitals Cup Final. The Old Boys included R. A. P. Hogbin, a former Hospital captain, and from start to finish played fine open football and never spared themselves a moment.

The weather was perfect and the ground in excellent condition when the Old Boys kicked off in brilliant sunshine.

Guy's started as though they were going to carry all before them, but gradually Hogbin got his men together and towards the interval were definitely on top.

Nicholson was again in great form, but, although he obtained the ball in most of the set scrums, the second and back row forwards were far too slow in getting it out, with the result that Lewis was smothered before he had a chance to set the backs in action. However, when he did get the ball away, Crawford and Steytler made heroic efforts to get through, but they were not supported as they might have been and several good openings were wasted.

Guy's opened the scoring after ten minutes' play, when Kark kicked a good penalty goal, but the Old Boys took up the offensive and after several bouts of passing, drew level when Drew cross-kicked and Johnston, following up fast, dived over to score a try which Hogbin failed to convert. Within a few minutes of the interval Hogbin gave the visitors the lead with a splendid penalty goal, and a little later Kark missed a similar opportunity for Guy's.

Early in the second half, Guy's flattered to deceive; they stormed the Old Paulines' line, but their efforts to get through were frustrated by a solid defence, and the Old Boys did not hesitate to tackle whenever a movement appeared dangerous.

The Hospital were eventually driven back, and almost from the first attack after the interval the Old Boys increased their lead, when Salmon intercepted a pass and raced over for a try, which Hogbin converted.

Nicholson and Darke tried hard to inspire Guy's to greater efforts, but all of no avail; the Old Boys' pack were a fine combination and backed up each other admirably, whereas Guy's were a straggling mass of individuals.

Near the end the visiting centres, who had played a great game throughout, made the issue safe when Olliver dribbled the ball up-field and Taylor finished off the movement by scoring an unconverted try in the corner.

Team.—C. Halamandres; A. B. Baxter, J. van A. Steytler, P. H. Birks, A. M. McCall; J. P. Crawford, J. W. Lewis; H. H. Crabb, E. S. Nicholson, M. R. Kark, A. Forbes, P. Ellis, F. Walt, P. Fletcher, C. S. Darke.

Inter-Hospitals Cup Final
Guy's v. St. Mary's

ON Wednesday, March 24th, Guy's and St. Mary's met at Richmond in the Final of the Hospitals Cup and, after a thrilling battle, St. Mary's won by the narrow margin of a placed goal, a penalty goal and a try (11 points) to a dropped goal (4 points).

It was a glorious afternoon and, in spite of so much rain during the week preceding, the ground was in perfect condition.

Both teams were at full strength, and this meant good news for Guy's, as R. C. S. Dick, their captain, had been nursing a poisoned foot and his appearance was doubtful until the eve of the match.

Before the game started, the famous milk churn, surrounded by a strong bodyguard of Guy's supporters, appeared on the field, but only one or two mild attempts were made to capture the trophy.

Most of the excitement took place around one of the goal posts, where the Guy's colours had been firmly fixed to one of the uprights. St. Mary's supporters made a successful attempt to hoist their colours on the other upright, but, after several scrimmages, the favours were removed, and the students then indulged in a battle with flour and oranges.

Winning the toss, St. Mary's decided to take advantage of a strong wind which was blowing straight down field, and, quite rightly, Guy's started by keeping the ball close and seldom allowed their opponents an opportunity to kick into touch. Guy's confounded the critics by their magnificent covering and tackling, which must have been the best this season, and, after keeping their opponents out for nearly forty minutes, it must have come as a cruel shock when Henley (who incidentally landed the penalty goal which lost Guy's the Final three years ago) kicked a great goal from mid-field and near the touch-line.

Guy's suffered another blow when, after twenty minutes' play, Crawford, who had been playing a great defensive game at fly-half, pulled a thigh muscle and had to retire to the wing. Steytler took his place and proved a tower of strength; time after time he made desperate efforts to get his backs going, and his tackling was superb, but St. Mary's were very alert and seldom allowed Guy's to get into their stride.

A word of praise to the Guy's forwards. They were splendid; in spite of the fact that they were up against a heavier pack, every member put every ounce of weight into the set scrums, and Nicholson, hooking skilfully, beat Parry time after time.

However, Guy's did not derive much advantage as the St. Mary's forwards, packing 3—4—1, were particularly quick in coming round, and Bok was on top of Lewis immediately the ball came out of the scrum. Nevertheless, Lewis performed extraordinarily well under the circumstances, and what few chances came his way were used to advantage.

One stumbling-block to Guy's was Owen-Smith, who gave a polished display at full-back; his uncanny sense of positioning, his quick eye for sizing up an opportunity to set his backs in motion and his amazing kicking must place him in a category by himself. On the other hand, Halamandres fielded with admirable judgment, and his tackling must have inspired those in front of him.

The first incident of note was a great run by Talbot, who caught Guy's defence when he cross-kicked, which nearly resulted in a try near the goal-posts, but one of the forwards following up knocked on, and from the scrum that followed Guy's cleared. The wind was definitely troubling Guy's, and both sides found it difficult to handle the light ball.

Time after time the St. Mary's backs carried out movements with quick precision, only to be checked in turn by Dick, Birks and Steytler, who brought their man down whenever he tried to break through.

A penalty taken by Henley went wide of the mark, and Graham-Jones just missed with a drop goal, but immediately before the interval Robin was penalised for lying on the ball, and Henley kicked a great goal to give St. Mary's the lead at half-time.

The wind dropped almost as soon as the teams crossed over, but Guy's were the first to attack and, following up a kick ahead, the forwards carried the ball right up to the goal line, and St. Mary's were compelled to touch down.

A little later Owen-Smith proved his worth when he fielded a long punt in his own 25, dodged Baxter and Birks, ran across field and started an attack which nearly ended in a try.

Following a scrum just outside the 25, Bok and Reynolds began a movement which enabled Chilcott to dart right through the centre and score behind the posts for Henley to convert.

St. Mary's were now playing confidently, and several movements kept Guy's on the defensive, until Dick relieved with a grand kick to touch. For several minutes Guy's tried hard to find a gap, but their backs appeared a trifle slow compared with the opposition, and seldom looked like getting through.

With only ten minutes to go St. Mary's increased their lead when Graham-Jones took a pass from Bok and passed to McRae. The former raced up on the outside of McRae, took his pass, cut inwards and sent in Cross for a gem of a try.

In spite of this reverse Guy's stuck to their task and, after considerable pressure in St. Mary's 25, Steytler took careful aim and dropped a perfect goal amidst great enthusiasm.

This success inspired Guy's to greater efforts, and on two occasions came within an ace of scoring, but the final whistle sounded and once again St. Mary's triumphed after a very hard fight.

Team.—C. Halamandres; A. B. Baxter, R. C. S. Dick (Capt.), J. van A. Steytler, P. H. Birks; J. P. Crawford, J. W. Lewis; H. H. Crabb, E. S. Nicholson, M. R. Kark, A. Forbes, I. G. Robin, P. Fletcher, C. S. Darke, F. Walt.

Hockey

THE Club have just successfully concluded their first tour abroad, in which they played in the Easter Festival at Guernsey.

The crossing on the way over was not very pleasant; we left Southampton in a snowstorm and, after passing the Needles, ran into a nasty swell. Few of us had much sleep that night. The weather, however, soon cleared, and for the rest of our holiday there were only two short showers.

On the Friday afternoon we played our first, and probably our best, match, beating Guernsey H.C. by four goals to two on a ground which was very dry in spite of the large amount of rain of the previous twenty-four hours. The game was fast and even, but Guy's always seemed to have the situation well in hand. Considering their state only eight hours previously, the team played excellently.

We took the opportunity, on the Saturday morning, of seeing some of the island coastline. It is very fine indeed.

In the afternoon we played the 2nd Battalion, The Sherwood Foresters, on their ground up at the Fort. The pitch was rather rough, so that defence was more difficult than usual, but the forwards played a magnificent game and won us the match by six goals to three. In spite of a cut eye and a damaged knee which we sustained during the game, the soldiers are reputed to have considered us "tough." We much enjoyed their kind hospitality afterwards in the Mess.

Sunday was spent exploring the island on foot and by car, and proved a welcome rest.

On the Monday morning we watched Guernsey beat Jersey by seven goals to one. Neither side was at full strength, but we anticipated a good win against Jersey in the afternoon. Most of us, however, were by this time a little tired, so that we won by only four goals to two in a rather scrappy game.

The Festival ended with the Dinner, followed by a first-rate dance; some of us are still a little hazy as to the events of that evening.

Everywhere we received wonderful hospitality. We were met on the quay at 6.30 on a bitterly cold morning and carried off by car to breakfast. Cars took us to and from each game, on jaunts around the island, and several times on personally conducted tours of the celebrated "Caves de Bordeaux." Many of the people we met inquired after individual members of the cricket team which went there last summer.

It was most encouraging to have an old Guy's man supporting us on the touch-line. We want to thank him for his keenness.

We also wish to take this opportunity of thanking all those who worked so hard making the tour possible; Mr. Marston and the Clubs' Union, whose most generous help made it possible for us to go, and all those our friends in Guernsey who were so kind to us. We look forward eagerly to a possible repetition of the tour in the near future.

Played, 3; won, 3; goals for, 14; goals against, 7.

Team.—J. H. Smart; C. H. Watts, T. C. Thorne; E. Smith, A. C. Greene, H. P. Merrick; F. R. Buckler, D. G. E. Roberts, E. J. Martin, S. G. McCallin, J. B. Franklin (Capt.), D. A. Hamilton.

Goal Scorers.—E. J. Martin, 6; F. R. Buckler, 5; J. B. Franklin, 2; S. G. McCallin, 1.

Hospital Information, etc.

Notices

Guy's Hospital Medical School

Applications are invited for the post of Clinical Assistant, part-time, in the Radiology Department (two vacancies). Duties to commence on April 26th, 1937. Salary to be at the rate of £150 per annum.

Applications should be lodged with the Dean, in the Medical School Office, on or before April 19th.

T. B. JOHNSTON,
Dean.

EXAMINATION FOR THE WOOLDRIDGE PRIZE IN PHYSIOLOGY

March, 1937

The following awards have been made:—

R. C. Hallam.—Prize (£10).

P. Harvey and A. F. Rushforth.—Certificates.

EXAMINATION FOR THE MICHAEL HARRIS PRIZE IN ANATOMY

March, 1937

The following awards have been made:—

H. A. Rowley.—Prize (£10).

K. O. Rawlings and A. F. Rushforth.—Certificates.

JUNIOR PROFICIENCY PRIZES

1936—1937

The following awards have been made :—

R. C. Hallam.—First prize (£20).

A. F. Rushworth.—Second prize (£15).

H. A. Rowley.—Third prize (£10).

T. B. JOHNSTON,
Dean.

Musical and Operatic Society

The Society is presenting a Concert of choral and orchestral works in the Physiological Theatre on Thursday, 29th April, at 8.15 p.m. No charge is being made for admission, and everyone connected with the Hospital will be welcome.

Invitations may be had on application to the Secretaries or to Mr. G. A. R. Winston in the Wills Library.

L. F. W. SALMON,
W. E. GREENWOOD,
Hon. Secretaries.

Pass List

CONJOINT BOARD.
FIRST EXAMINATION.
March, 1937.

Anatomy.

B. Alhadeff
W. E. R. Budd
B. M. Coffey
A. G. C. Corless
C. H. Dunn
C. R. Morgan
T. N. Praat
R. K. Roberts
T. H. S. Smith
E. R. J. Walmsley

Physiology.

B. Alhadeff
W. E. R. Budd
D. I. Chapman
W. F. Clarke
B. M. Coffey
E. W. Crews
H. G. King
T. N. Praat
E. A. Spouse
G. P. A. Sechiari
T. C. Thorne
E. R. J. Walmsley
J. K. Wood

Pharmacology.

C. A. G. Cook
K. R. D. Porter
T. S. Leedham
A. M. McCall

SOCIETY OF APOTHECARIES OF LONDON.
FINAL EXAMINATION.
March, 1937.

Surgery.

*C. L. Blacklock
K. G. Pascall
R. A. Stenhouse
R. H. S. Thompson

Midwifery.

W. G. Zorab.

* Has now completed the examination.

UNIVERSITY OF LONDON.
SECOND EXAMINATION FOR MEDICAL DEGREES.
PART I.
Organic Chemistry
March, 1937.

Amiel, G. J.
Bunn, H. W.
Coffey, S.
Cole, S. N.
Craig, R. A.
Cross, W. G.
Dawe, E. B.
Erulkar, J.
Franey, R.
Frank, B.
Gill, R. A.
Gillett, J. A.
Hinde, R. T.
Holman, J. C.
Jones, H. P.
Joyce, H. L.
Kynaston, R. U. F.
Lauder, J. R.
McFall, G. E.
Muntarbhorn, S.
Rees, R. J. W.
Rendell-Baker, L.
Rewell, R. E.
Robinson, E.
Smith, P. A. J.
South, R.
Spicer, C. C.
Stanley, R. J.
Stead, J. S.
Swift, P. N.
Tolhurst, St. J. M. A.
van der Westhuizen, P. C.
Watson, W. R.
Williams, J. A.
Wright, D. H.

PART II.
March, 1937.
Anatomy, Physiology and Pharmacology

Baelz, O. H. E.
Bloom, A.
Bowen-Jones, J. A.
Channing, G. H. D.
Clayton, R. B.
Corker, R. M.
Davies, E. R.
Dawes, A. M.
Drew, A. J.
Dyke, W. R.
Evans, R. H.
Fung, O. C.
Hallam, R. C.
Hamilton, D. A.
Harvey, P.
Hinds, S. W.
Houston, J. C.
Hunt, J. N.
Jones, J. A.
McClintock, C. L. T.
Meldrum, D. H.
Mobbs, E. C.
Moore, R.
Ponder, R. C.
Rowley, H. A.
Rushforth, A. F.
Scott, L. G.
Watts, J. A. E.
Wetherell, S.
Wiggins, W. R. D.
Williams, J. N.
Wilson, C. W.

Papers by Guy's Men

L. R. Broster and Another. The adrenal cortex. *Brit. Med. Jour.*, 1937, i, 662.

John A. Ryle. Some general and remote consequences of gastric disease. *Clin. Jour.*, 1937, lxvi, 133.

S. J. Hartfall. Acute blood disorders. *Ibid.*, 154.

Appointments

Dr. J. Barlow Schofield, appointed Honorary Obstetrician to the Nightingale Maternity Home, Derby.

G. G. T. Tregarthen, Esq., L.D.S., appointed Lecturer and Tutor in Dental Mechanics and Prosthetics, and Dental Prosthetic Surgeon to the University of Durham College of Medicine, as from May 1st next.

H. H. Kenshole, L.R.C.P., M.R.C.S., L.D.S., appointed Assistant Dental Surgeon, St. Bartholomew's Hospital, London, E.C.

Marriage

RUSSELL—CLARK.—On March 25th, 1937, at Ilford, John Fitzgerald Russell, L.D.S., R.C.S. Eng., son of Dr. and Mrs. Russell, of Upney, Barking, to Joyce Lavinia Elizabeth Clark, daughter of the late Mr. and Mrs. Clark, of Manor Park.

CAMERON—CURTIS.—On April 3rd, 1937, at Holy Trinity, Redhill, Heston Cameron, only son of Col. and Mrs. D. C. Cameron, of Truxford, Elstead, Surrey, to Sylvia, daughter of Mr. and Mrs. F. Curtis, of Alton House, Redhill, Surrey.

EDS. { A.G.W.H. / H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *24th April 1937* — *Number 1272*

PASSIM

THE exodus of Israel out of Egypt may have been unruly, and confusion has more than once overcome the Chilean Navy, whose Admirals, we are told, still wear spurs, but rarely, since the world began, can such chaos have existed as was seen over the arrangements for the recent alterations of the beds and wards in the Medical Block.

There are many difficulties that must be encountered in effecting such a complicated change-over, but we cannot help but feel that they were much exaggerated by the extraordinary apathy and air of mystery that existed throughout the whole procedure.

It was in 1935 that it was decided that the beds available in the Medical Block were somewhat inadequate in number, and that the only solution was to make use of the beds in Clinical Ward and abolish the appointment of Clinical. This, not unnaturally, caused a good deal of discussion, since many considered that Clinical was a valuable tradition, which should be continued, and the whole position was complicated by the fact that the Children's Department was being temporarily housed in John Ward at that time, and that, consequently, any allocation of beds could not be permanent until this had been found accommodation elsewhere. However, in March this year, when the children had been removed to the old Bright Ward, it became possible to put into action a scheme which had been approved by the Court some two years ago, whereby Mary Ward would become a men's ward and would be renamed after Richard Bright, Stephen Ward would become a women's ward and assume the name of Mary, and the whole of Clinical would be given over to female cases and called Miriam Ward. Addison Ward alone was to retain its name and the sex of its patients. By this scheme not only would the number of medical beds available to the physicians be increased by thirty-eight, and also the number of female beds be more closely approximated to that of the male beds, but a few beds could now be spared for special departments such as the Nephritis Clinic and the Clinical Research Unit.

Thus, quite clearly, there were many advantages to be gained by the new scheme, and it only remained to invent some appointment that could be substituted for that of Clinical, and to allot the beds in fair proportions. Accordingly the new appointment of Assistant House Physician was devised and, in our issue of March 13th, we published an account of the duties and beds that it was proposed to allot to each of them, which we reprint as follows :—

A.H.P.—1.
- The Senior Physician ..... 2 beds.
- His corresponding Assistant Physician 1 bed.
- Physician for Psychological Medicine 1 bed.
- Nephritis Clinic ..... 1 bed.

A.H.P.—2.
- The Second Senior Physician ..... 2 beds.
- His corresponding Assistant Physician 1 bed.
- Clinical Research Unit ..... 1 bed.
- Nephritis Clinic ..... 1 bed.

A.H.P.—3.
- The Third Senior Physician ..... 2 beds.
- His corresponding Assistant Physician 1 bed.
- Physician for Diseases of the Nervous System ..... 2 beds.

A.H.P.—4.
- The Junior Physician ..... 2 beds.
- His corresponding Assistant Physician 1 bed.
- Physician for Psychological Medicine 1 bed.
- Nephritis Clinic ..... 1 bed.

A.H.P.—5.
- The two Senior Physicians ..... each 1 bed.
- The Fifth Assistant Physician ..... 1 bed.
- Clinical Research Unit ..... 2 beds.

A.H.P.—6.

The two Junior Physicians	each 1 bed.
Physician for Disease of the Nervous System	2 beds.
Nephritis Clinic	1 bed.

Such an arrangement had many drawbacks that were obvious at first sight, not the least of which were the fact that one of the Sisters in the Medical Block would have no less than ten House Physicians and Assistant House Physicians to attend to, and that Dr. Osman, with his newly acquired quota of four beds, would have the luxurious, if somewhat embarrassing, experience of having a separate Assistant House Physician for each of his cases.

These, and other, real difficulties to the working of the scheme were daily topics of conversation among those whom it would affect, as April 16th, the date proposed for both the change-over of wards and the beginning of the new appointment, drew nearer. Perhaps something would be done; perhaps not, but just as the mystery reached its height, some forty-eight hours before the appointed day, the news leaked to us through devious and complicated channels that some very drastic alterations had been made in the duties of the Assistant House Physicians, and it was with very great interest that we examined these proposals.

It has been decided that the Assistant House Physicians need not, after all, be qualified, and this has avoided the necessity of altering the date of the appointment by a fortnight or so, in order that the results of the examinations of the Royal Colleges should be known. Thus the new appointment will still be open to all students at the end of the clinical period of their studies, in the same way that Clinical was, and this we consider to be an advantage.

However, the main point in the new scheme is that the physicians, including several of the specialists, are split up into four groups, each group having a tendency towards a particular speciality, and to each of these groups one, and in two cases two, of the Assistant House Physicians are attached. Each Assistant House Physician has five beds, which are divided between his Senior Physician, the corresponding Assistant Physician, and one or other of the specialists, and over these he presumably has control, under the nominal supervision of the House Physician of his group, and can admit into them cases from Out-Patients or from the lists of the physicians under whom he works.

The Assistant House Physicians will also "take in" in rotation, and, though there is no mention of it in the Standing Orders of the appointment, we presume that, like the House Physicians do at present, they may, up to a point, admit cases into each other's beds during their "take in," so long as they do not use any of the beds set aside for the Special Departments. They will also attend the Out-Patient Department with their Assistant Physician, the Clinic of the Special Department with which they are connected, and as many of the ward rounds of their physicians as they can, so that they will have plenty to do and should come in contact with a variety of clinical material during the three months of their appointment.

It is also laid down in their Standing Orders that the Assistant House Physicians are responsible for writing of reports on their cases, in the same way that Ward Clerks write them at present, and this, we think, is somewhat unnecessary, for though, no doubt, something of value may be learned from writing long and detailed descriptions of the patient's antecedents, the colour of his hair, and whether or not he played the usual games at school, we feel that all these lessons will have been well learned by the time this appointment has been reached, and that rather it should be aimed at encouraging a neat and concise account of the case to be written in the space allotted to the House Officer's clinical notes on the bed letter. In this way, some thirty-five cases would be liberated for the Medical Ward Clerks to study and write reports upon.

This, though, is but a detail, which could easily be adjusted at a later date, and the scheme, as a whole, seems very satisfactory, and we feel that our readers will join with us in congratulating the Medical Committee on their astuteness and resource in devising such an effective compromise for a very difficult set of circumstances, and in hoping that their plan may soon be working smoothly to the advantage of all.

The details of the revised scheme and allocation of beds is as follows :—

GROUP 1

Medico-Neurological Unit

	H.P.	A.H.P.1	Neur.H.P.	Total
Dr. Hurst	22	2	—	24
Dr. Conybeare	8	1	—	9
Dr. Symonds	—	2	5	7
Dr. Gillespie	—	—	5	5
Total	—	—	—	45

GROUP 2

Medico-Cardiological Unit

	H.P.	A.H.P.2	A.H.P. 3	Total
Dr. Poulton	18	3	3	24
Dr. Campbell	7	2	—	9
Dr. Grant	6	—	2	8
Dermatological	H.P.	—	—	3
Total	—	—	—	44

GROUP 3

Medico-Tuberculous Unit

	H.P.	A.H.P. 4	A.H.P. 5	Total
Dr. Mutch	18	3	3	24
Dr. Boland	7	2	—	9
Dr. Hampson	6	—	2	8
Total	—	—	—	41

GROUP 4

Medico-Renal Unit

	H.P.	A.H.P. 6		Total
Dr. Marshall	21	3	—	24
Dr. Douthwaite	7	2	—	9
Nephritis Clinic	4	—	—	4
Total	—	—	—	37

ARRANGEMENT OF NEW WARDS

Addison

Medico-Tuberculous Unit.—Dr. Mutch, 12; Dr. Boland, 5; Dr. Hampson, 4—21.

Medico-Renal Unit.—Dr. Marshall, 12; Dr. Douthwaite, 5; Dr. Osman, 2—19. Total 40.

Bright

Medico-Neurological Unit.—Dr. Hurst, 14; Dr. Conybeare, 5; Dr. Symonds, 4; Dr. Gillespie, 1.

Medico-Cardiological Unit.—Dr. Poulton, 14; Dr. Campbell, 5; Dr. Grant, 4.

Dermatological.—2—Dr. Barber, 1; Dr. Forman, 1.

Mary

Medico-Neurological Unit.—Dr. Hurst, 10; Dr. Conybeare, 4; Dr. Symonds, 3; Dr. Gillespie, 4.

Medico-Cardiological Unit.—Dr. Poulton, 10; Dr. Campbell, 4; Dr. Grant, 4.

Dermatological,—1—D4. Forman.

Miriam

Medico-Tuberculous Unit.—Dr. Mutch, 12; Dr. Boland, 4; Dr. Hampsons, 4.

Medico-Renal Unit.—Dr. Marshall, 12; Dr. Douthwaite, 4; Dr. Osman, 2.

However, there is one aspect, in this week of momentous changes, that calls for no congratulations whatever, and that is the muddle and confusion with which the scheme was put into practice, and to us it seems quite incredible that only one day before the actual appointment started the Medical School Office knew nothing of the revised scheme of duties; the six gentlemen who had been appointed, who had made their choice of physician under the original scheme of duties, then had no idea to whom they had been appointed, and, more important still, Sisters of the wards involved in the change-over knew neither where they were going nor by whom the actual moving would be carried out. Such facts can hardly have increased the comfort or safety of the patients, and in consequence it seemed nothing short of a miracle that the actual moving was carried through as quickly and efficiently as it was; a feat which reflects great credit on the Works Department—a member of whom actually so far forgot himself as to be seen running—and the Ward Sisters in question, one of whom could be seen, like Mathew at receipt of custom, standing at the door of what was Mary all the afternoon, checking patient after patient, as they were carried past in their beds, like lepers to await a moving of the waters.

▭

The Surgical Wards have also had their share in the changing of names, and at the last meeting of the Court it was decided that Lazarus Ward should change its name to Keats Ward, and we need hardly add that this is to provide some sort of memorial to the poet of that name, who was a student here and, as one of our reviewers remarked some time ago, has now become the subject of considerable rivalry between St. Thomas's Hospital and ourselves, as to whose laboratories were the cause of his consumption. We are glad that his sojourn here is to be commemorated, and think that the choice of memorial is a happy one, more especially since it will remove, let us hope for ever, a particularly distasteful name.

Cornelius Ward is also to lose its name and will become Astley Cooper Ward.

▭

We have received a most interesting letter from Professor Ryle, on the subject of permitting the entry of women students to London hospitals, which we publish on another page. In this letter he reasserts his views in favour of medical co-education most energetically, and makes certain accusations against us, but, in spite of these vigorous protests on behalf of the ladies, we feel still confident that we are voicing the opinion of the majority when we say that any alteration of the policy of the Hospital regarding the admission of women students would be definitely harmful.

An eminent throat surgeon remarked to us that, in our arguments against the advent of women here last week, we implied that he and his colleagues were unable to teach without the aid of anecdotes unsuitable for the feminine ear, and we would take this opportunity, both of stating that nothing was further from our minds, and of assuring our critic in particular that his teaching might well be heard by the whole world.

However, narrow-minded, ungenerous and straight-laced as we may appear to Professor Ryle, we seem to remember, deep down in our Mid-

Victorian memories, the discontent that followed the admission of women students to both St. Mary's and the London Hospital, and of the rejoicing at both these wise institutions when they were once more excluded.

We have no grudge against medical women personally, and would like to accept Professor Ryle's invitation to meet many of them, but we still regard their admission as one of the first signs of the decline and fall of a first-class teaching hospital.

Surely this unhappy experiment need not be repeated at a time when overcrowding is already a serious problem.

▭

IT has been said that Guy's never gets any publicity, but that does not seem to be true to-day, for only the other morning at breakfast, awakened maybe by a sudden stimulus from the lukewarm coffee, we noticed a glaring headline in a daily picture paper that told us of a surgical marvel that was taking place right in our very midst. Apparently some unfortunate young woman had been injured in a motor smash, and, on admission to this Hospital, it was found that she had no less than four fractures in her lower jaw, and a certain amount of facial injury into the bargain. Our contemporary went on to explain that the lady and her relatives, not unnaturally, had felt some anxiety as regards the future of her face, but, though, at first resigned to a lifetime of complete disfigurement, she had now been told that there was hope of restoring her beauty; and the paper added that surgeons at Guy's, were now busy remodelling her face from a photograph.

The *dramatis personæ* of this "epic of real life" we were never told, but we hope very much that the result was satisfactory.

▭

NOT so long ago we drew attention to the imposing series of ladders leading to the top of the tower of the Medical Block. Needless to say, those ladders are still there, and their purpose as mysterious as ever. However, during last week signs of activity were seen, and on rising early from our couch one day, we were amazed to see a peculiar garment floating proudly in the breeze from the weather vane, and easily visible through the daily pall of soot from the Works Department chimney. The owner of this original emblem is as yet unknown, but considerable speculation was caused by the sight of a woman descending the ladders soon after. Had some sky-riding maiden fallen from her aeroplane and, spending the night impaled upon the lightning conductor, left remnants of her clothing thus visible, or had a similar fate befallen that wicked old witch from the Borough when prying down the chimney? But no, all these attractive rumours were dispelled when the garment was found to be merely an old green gown such as are used in operating theatres, which had quite obviously just blown up there.

▭

As has always been our custom, we devote a good deal of space in this number to reviews of books, and we hope that some of these small criticisms may be of help in guiding possible purchasers.

It has been found impossible, however, to include as many reviews as we would have liked, but we hope to publish more in our next issue.

▭

WE congratulate the following on their appointments :—

House Physicians—
To Dr. Hurst—Mr. B. W. Hunt.
To Dr. Mutch—Mr. N. C. Neville.

House Surgeons—
To Mr. Hughes—Mr. F. N. Malan.
To Mr. Bromley—Mr. G. O. Jelly.

Obstetric Resident—
To Mr. McNair and Mr. Cook—
Mr. C. S. Darke.

Out-Patient Officers—
Mr. P. M. Davies.
Mr. W. F. Dunham.
Mr. A. J. Smith.
Mr. G. E. Yardley.

Assistant House Surgeons—
To Mr. Ogilvie—Mr. T. H. Shire.
To Mr. Grant Massie—Mr. A. A. Shein.
To Mr. Eckhoff—Mr. E. Gill-Carey.
To Mr. Brock—Mr. C. H. Edwards.

Throat and Ear House Surgeons—
To Mr. Mollison—Mr. B. G. A. Lilwall.

House Physician for Diseases of Children—
Mr. M. R. McEvoy.

Assistant House Physicians—
To Dr. Hurst and Dr. Conybeare—
Mr. L. C. Thompson.
To Dr. Poulton and Dr. Campbell—
Mr. F. R. Kilp.
To Dr. Poulton and Dr. Grant—
Mr. W. W. Gilford.
To Dr. Mutch and Dr. Boland—
Mr. T. A. Gardiner.
To Dr. Mutch and Dr. Hampson—
Mr. M. R. Woods.
To Dr. Marshall and Dr. Douthwaite—
Mr. R. Edwards.

The Hand—II

Further Notes of a Lecture delivered at Leeds University on 16th February, 1937, by W. H. Ogilvie, Esq., M.Ch.

THE main facts about the anatomy of the hand have been known for centuries, but even facts take on a new appearance when studied in a new light. The buildings of this hospital have stood very much as they are to-day for two hundred years, but they probably represent something entirely different to a patient, a student, the superintendent and the hospital architect. When the hand is examined with regard to its infections, it is not so much the origin, insertions and nerve supply of its muscles that matter, as the spaces between and around them, the lymphatics that drain them, the places where sepsis may enter, and the routes where drainage may be established most effectively and with the least damage. An American surgeon, Kanavel, has studied this aspect of the anatomy of the hand in the greatest detail, and it is largely upon his work that our present teaching is based. The main points of Kanavel's teaching are demonstrated in an admirable film in the Kodak Library.

The skin of the hand is adapted for grasping on the flexor aspect of the palm and fingers, the surfaces being thrown into closely set ridges, planned like the tread of a tyre to give a firm grip and anchored to the chassis, the palmar fascia, tendon sheaths and bones, by tough fibrous bands, which divide the subcutaneous fat into numerous little compartments. At the flexion creases, the fat is absent, and the skin is directly in contact with the tendon sheaths and palmar fascia. Lymph vessels cannot traverse this fibrous layer, and the lymphatic spaces on the flexor aspect of the fingers and palm pass backwards to channels that run on the dorsum. Any infection in the hand is therefore accompanied by swelling of the back, where the loose subcutaneous tissue allows it to develop. In the arm the lymph vessels accompany the veins. The lymphatics from the ulnar side of the hand pass to one or two glands above the internal condyle, in the angle between the brachial vessels and the ulnar nerve; those from the medial side go directly to the axillary glands. A few vessels from the thumb may accompany the cephalic vein and drain into the lowest cervial glands.

The flexor tendons pass into the hand from the forearm under the volar carpal ligament. In the fingers and thumb they are enclosed in fibrous sheaths, the thecæ, which extend from the metacarpo-phalangeal joints to the base of the last phalanx. The thecæ are attached to the sides of the flat volar surface of the phalanges, and to the capsule of the joints; opposite the phalanx they are stout tubes, opposite the joints, where they must wrinkle in flexion, they are much thinner. Within the fibrous sheaths, the flexor tendons are covered with a synovial layer, whose arrangement is different in the middle three fingers from that in the thumb and little finger. In the index, middle and ring finger the synovial sheath lines the theca and extends proximally only as far as the distal transverse crease of the palm. In the little finger the sheath extends the whole length of the tendon, to become continuous at the wrist with the common synovial pouch, known as the ulnar bursa, in which lie the flexor sublimis and profundus tendons and the median nerve. The ulnar bursa covers the tendons from just below the carpal ligament, to about one inch above the distal transverse crease in the wrist. The synovial sheath in the thumb lines the theca and extends proximally on the flexor longus pollicis tendon to a point about $\frac{3}{4}$-inch above the distal transverse crease in the wrist. The portion of this sheath uncovered by theca is known as the radial bursa. The radial and ulnar bursæ communicate in about 50 per cent. of bodies at some point where they lie in contact.

Behind the tendons of the flexor sublimis and profundus in the wrist and palm, and between them and the next layer, that is the radius and ulna covered by pronator quadratus, the capsule of the wrist joint, and the metacarpals covered by the palmar interossei and the adductors of the thumb, lies an areolar tissue space. This space is further divided into three. The narrows of the carpal tunnel separates a space in the forearm from

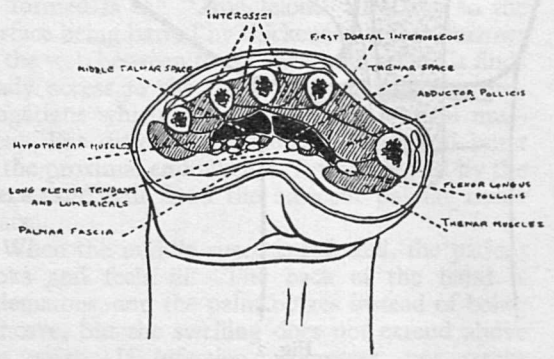

Fig. 1—Transverse Section across Metacarpal region of Right hand, to show the Cellular Tissue Spaces.

those in the hand. This space, between flexors in front and pronator behind, is the space of Parona. In the hand, a fibrous septum passing from the deep aspect of the tendons to the third metacarpal divides the space in the palm into two : the middle palmar space to the ulnar side of the septum, the thenar space to the radial side. (Fig. 1.)

The middle palmar space is bounded by the tendons to the middle, ring and little fingers in front, the three inner metacarpals and the intervening interosseous muscles behind, the muscles of the hypothenar eminence medially, and the fibrous septum laterally. The thenar space lies between the index tendons and the lateral expansion of the palmar fascia in front, the thumb adductors behind, the flexor longus pollicis and thenar muscles laterally and the fibrous septum medially. Each space is prolonged along the lumbrical muscles towards the web between the fingers, the middle space having two such lumbrical tunnels one on each side of the ring finger, the thenar space one between the index and middle fingers and one outside the index. (Fig. 2.)

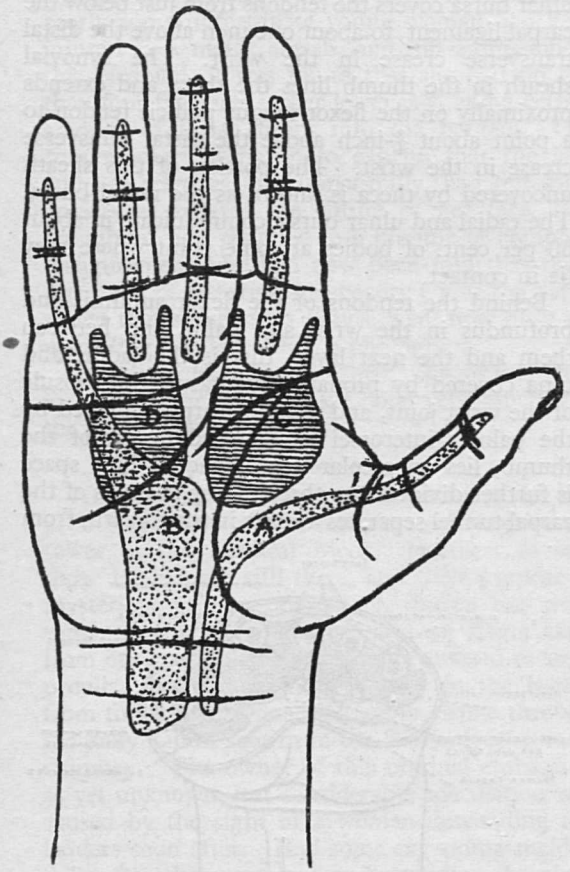

Fig. 2

Synovial Sheaths and Cellular Tissue Spaces in the hand.
A. Radial Bursa. B. Ulnar Bursa.
C. Thenar Space. D. Middle Palmar Space.

LYMPHANGITIS

Lymphangitis is an infection of the superficial planes of the hand, arising in a scratch or a prick. The organism is usually a streptococcus. In men and women working in hospital a virulent and sometimes fatal infection may thus be contracted during an operation on a case of peritonitis or the conduction of a post-mortem examination. Lymphangitis is recognised by redness, pain and swelling of the affected part of the hand or finger, most marked round the point of entry, but extending over a wide and ill-defined area. The dorsum of the hand is puffy. Streaks of red may outline the lymphatics in the arm and forearm that drain the affected part, and the glands in their course will be palpable and tender. The patient feels ill, and the temperature and pulse are raised.

The treatment of lymphangitis is, as the Kanavel film puts it in a terse title, " masterly inactivity." Inactivity is incumbent not only on the attendant but the patient. He should cease work, and, except in minor infections, he should go to bed. The hand and arm should be well wrapped up and kept dry and warm. A splint should be applied to the hand and forearm, and if lymphangitis is present, the whole limb should be slung in a Thomas's arm splint from a Balkan frame. Since the infection is nearly always streptococcal, Prontosil should be given. Operation is only required later if abscesses form.

INFECTIONS OF THE TENDON SHEATHS

The tendon sheaths are infected either by the extension of an infection arising in the terminal phalanx or by a puncture penetrating them directly. In the flexion creases of the finger the theca is thin and lies directly under the skin, so that a thorn or the point of a pin or nail may easily penetrate the sheath and carry infection. When a tendon sheath is infected, the finger is swollen and very tender, but not red. The swelling and tenderness are most marked over the line of the sheath, on the flexor aspect of the finger. The finger is held in a position of partial flexion, and any movement is avoided. Passive movement, especially passive extension, causes acute pain. If the thumb or little finger is involved, the pain and tenderness are found at the anatomical site of the radial or ulnar bursa in addition to the theca. Swelling in the palm does not appear, being masked by dense fascia, but the dorsum of the hand becomes puffy. The prolongation of the bursa above the wrist is distended.

Immediate recognition and correct surgical treatment of a sheath infection is absolutely essential if the function of the hand, or even of the finger, is to be saved. Delay means that infection in the closed space will rapidly destroy the tendons, and probably involve the phalangeal joints as well. Incorrect treatment, drainage by the old-fashioned incision in the mid-line of the finger, fails to relieve tension efficiently, allows the tendon to come out of its sheath and lie exposed in the wound, so that it will probably slough, and certainly become adherent, and leaves inevitably a painful scar exposed to pressure. The tendon sheaths should always be drained by an incision along the side of the finger. (Fig. 3.)

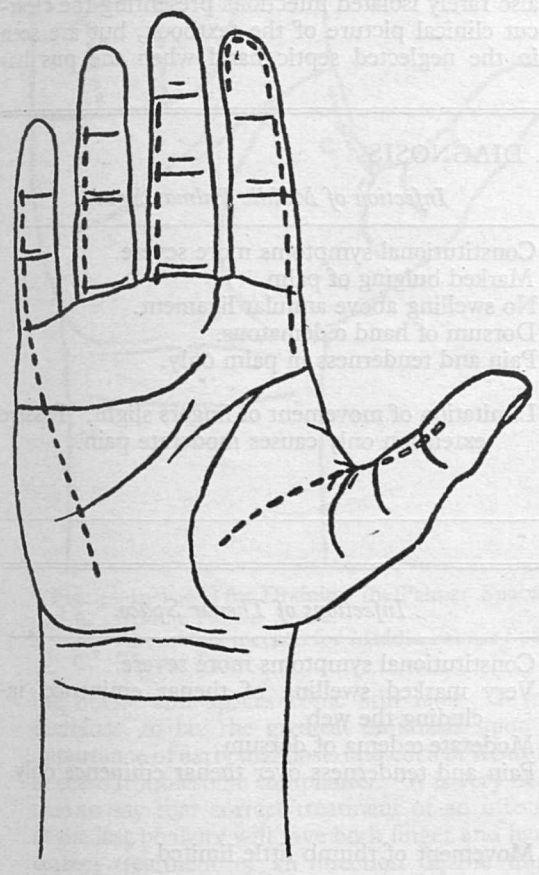

Fig. 3
Incisions for Draining Pulp Infections (shown on index finger), Thecal Whitlows, and abscesses of the Synovial Bursæ.

A tourniquet is first applied, since it is difficult except in a bloodless field to recognise the sheath and estimate the degree of infection. The incision may be made on either side of the finger. I personally prefer the ulnar side to avoid the lumbrical muscle, but in the index the radial side appears an easier approach. In mild infections it is as well to avoid laying the theca open completely, and I should recommend two short incisions opposite the phalanges, leaving a bridge of skin and theca opposite the joints.

Correct surgical treatment of a thecal infection is, however, useless unless the movement of the tendon is preserved; our aim should, therefore, be to start voluntary movement early. Free and early drainage will help this ideal, by overcoming the infection as soon as possible. When the sheath contains pus, a strip of corrugated rubber should be laid down to it, but removed in forty-eight hours at the latest; if the contents are only turbid fluid, a light plug of gauze soaked in Eusol should be placed in the wound, and removed next day. Movements of the fingers should be practised by the patient from the start, first while the hand is immersed in a bath of hypertonic saline; later, when the wounds are dressed with sterile gauze, at frequent intervals during the day.

TISSUE SPACE INFECTIONS

The tissue spaces may be infected :—

(1) by penetrating wounds;
(2) by extension from infected callosities along the lumbrical tunnels;
(3) by rupture of the proximal end of an infected tendon sheath.

The middle palmar space is sometimes penetrated when a drill is carelessly thrust through an object held in the palm of the hand. More often the infection follows what the Americans call a "frog felon." When we use our hands for unaccustomed labour, digging or rowing, blisters form over the metacarpal heads. In the horny hand of the labourer the cuticle cannot be raised in a bleb, and the serum which is poured out as the result of excessive use is pent up under the callosities, and may become infected. The abscess so formed is the "frog felon." Its way to the surface being barred by thickened skin, it burrows in the web between the metacarpals, where it finds ready access to the tissue spaces along the prolongations which accompany the lumbrical muscles. Pus distending a tendon sheath will burst at the proximal end where it is unprotected by the theca, and will flood the adjacent palmar tissue space.

When the middle space is infected, the patient looks and feels ill. The back of the hand is œdematous, and the palm bulges instead of being concave, but the swelling does not extend above the wrist. If infection progresses, pus tracks along the lumbrical tunnels and points in the web between the fingers.

The thenar space may likewise be infected by extension of sepsis from callosities or from a sheath infection in the thumb or index. It is more frequently involved in punctured wounds than the middle space, because it is unprotected by the dense palmar fascia, and because the web of the thumb is wounded by any jagged object slipping through the grasp, splintered wood in labourers, frayed wire rope in sailors. An infection of the thenar space is unmistakable. The fascia being thin the whole web of the thumb becomes globular, red and hot. Movements of the thumb are not much limited, unless there is also an infection of the radial bursa.

Infections of the tissue spaces of the hand must be distinguished from those of the radial and ulnar bursæ, which they closely resemble. The main points of distinction are set out in tabular form :—

DIFFERENTIAL DIAGNOSIS

Infection of Ulnar Bursa.	*Infection of Middle Palmar Space.*
Constitutional symptoms severe.	Constitutional symptoms more severe.
Slight swelling of inner half of palm.	Marked bulging of palm.
More obvious swelling above annular ligament.	No swelling above annular ligament.
Dorsum of hand œdematous.	Dorsum of hand œdematous.
Pain and tenderness over site of bursa in palm and wrist.	Pain and tenderness in palm only.
Voluntary movements of index, middle and ring fingers limited, and passive extension causes pain. These symptoms more marked in little finger.	Limitation of movement of fingers slight. Passive extension only causes moderate pain.

Infections of Radial Bursa.	*Infections of Thenar Space.*
Constitutional symptoms severe.	Constitutional symptoms more severe.
Slight swelling of thenar eminence.	Very marked swelling of thenar eminence, including the web.
No œdema of dorsum of hand.	Moderate œdema of dorsum.
Pain and tenderness over flexor aspect of phalanges and metacarpal of thumb, and radial side of wrist.	Pain and tenderness over thenar eminence only.
Thumb held in flexion ; active movement and passive extension increase the pain.	Movement of thumb little limited.

The middle palmar space is drained through an incision in the web between the middle and ring fingers ; the knife should go no further than the distal crease in the palm, or the arterial arch may be injured. (Fig. 4.) The wound is deepened till the lumbrical muscle is seen, when a pair of forceps thrust along its dorsal surface will pass into the middle space. A strip of rubber is inserted along the track of the forceps. The thenar space is opened by making an incision along the web and putting in a drain along the anterior surface of the adductor transversus pollicis.

INFECTIONS OF THE FINGERS

A knowledge of the anatomy of the synovial bursæ and connective tissue spaces is essential to a proper understanding of the surgery of the septic hand, but the knowledge is to some extent academic. Infections of the bursæ and spaces are rarely primary infections ; they are usually the late result of other lesions, and are due to the incorrect treatment of these lesions. They are also rarely isolated infections presenting the clear-cut clinical picture of the textbook, but are seen in the neglected septic hand when the pus has broken all anatomical barriers, and energetic treatment, though it may save the patient's life and his hand, nearly always leaves considerable deformity.

The primary infections of the hand are seen in the fingers, and in most cases in the last phalanx of the fingers. The most important lesion of all

is a subcutaneous infection of the pulp of the last phalanx, for it is the one in which nearly all the more serious troubles have their origin; thecal and subperiosteal whitlows follow it, infections of

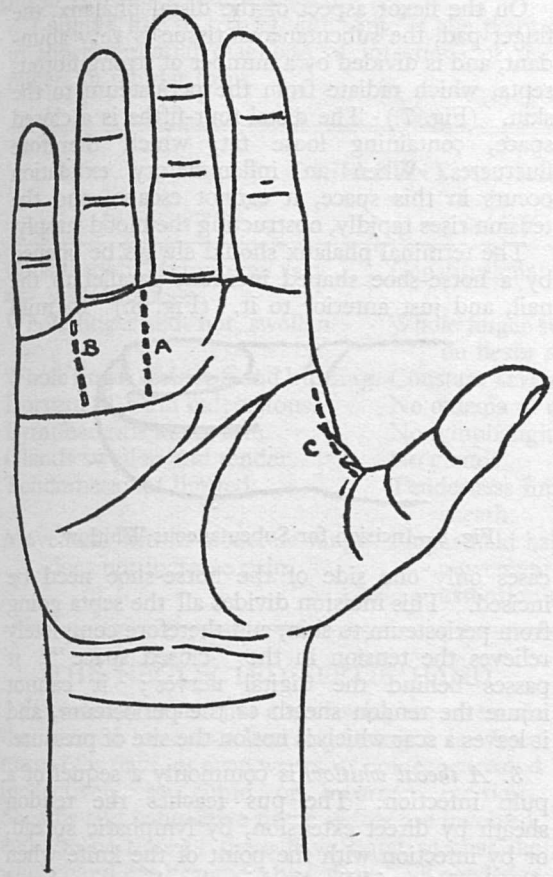

Fig. 4—Incisions for Draining the Palmar Spaces.
A. Middle Palmar Space.
B. Alternative incision for Middle Palmar Spaces.
C. Thenar Space.

the bursæ and spaces come still later. I wish, therefore, to lay the greatest emphasis upon the importance of early diagnosis and correct treatment in these troublesome complaints. It is very nearly true to say that correct treatment of an infection of the last phalanx will save both finger and hand; correct treatment of an infection of the finger, that is of the sheath, will save the hand, but leave the finger crippled, while, when infection has entered the palm, free drainage will save the limb, but usually leaves some disability.

Infections of the fingers are called whitlows. There are four varieties. (Fig. 5.)

1. Subcuticular.
2. Subcutaneous.
3. Thecal.
4. Subperiosteal.

The two first are primary; the third and fourth are usually secondary to a subcutaneous whitlow.

1. *Subcuticular whitlows* are of two varieties.

a. The purulent blister is a superficial infection that may follow any trivial scratch, or may even arise where there is no visible injury.

Pus accumulates under the cuticle, forming a rounded yellow swelling. There is little pain and no constitutional symptoms. Treatment consists in snipping away the cuticle and applying antiseptic dressings. Should there be much pus or any swelling of the phalanx, a subcutaneous whitlow may be suspected, and the base of the blister examined for a small track leading to pus under the skin.

b. Paronychia. The nail is limited at the sides by a shallow groove, and above it is overhung by a semi-circular fold of skin, the cuticle or paronychium. The root of the nail extends about $\frac{1}{8}$-inch under the paronychium, and here the nail is formed by cornification of the stratum lucidum of a specialised strip of epidermis. As the nail is formed it is pushed forwards, and appears on the surface, as yet unfinished; while cornification is incomplete the nail is imperfectly translucent, and this immature nail is the opaque area known as the moon. The nail grows at the rate of 1/32nd to 1/25th of an inch a week, and as it advances over the nail bed its thickness is added to from below. There is no subcutaneous tissue under the nail bed, the deeper layers of the dermis being continuous with the periosteum. This form of

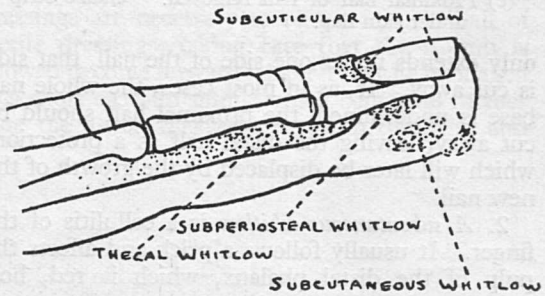

Fig. 5

subcuticular whitlow is much more important because of its chronicity. The infection may enter through a fissure at the side of the nail, or be caused by a small injury in manicuring. It is a frequent cause of casualties among dressers, because daily scrubbing with strong antiseptics impairs the resistance of the skin, and the entry of pathogenic organisms from septic dressings is rendered easy.

Paronychia in its early stages is seen as a reddening and thickening of the fold at the edge or base of the nail; when the fold is pressed a bead of

pus appears between it and the nail. At this stage a wisp of gauze soaked in Eusol or hypertonic saline should be pushed in between the thickened fold and the nail, and changed every few hours. If the hand is rested, and this treatment pursued energetically, the infection will usually subside in a few days; otherwise pus gets under the nail itself, where free drainage is impossible. Exuberant granulations form between the nail and its bed, and cure is much more difficult.

It is usually possible to determine, by pressing on the nail, whether infection has spread to the nail bed. If this has occurred, the nail feels wobbly, and pressure produces considerable pain, and causes a bead of pus to appear at the root of the nail. An anæsthetic should now be given, and a band tied round the root of the finger to act as a tourniquet. Two parallel incisions are made upwards, starting at the sides of the nail and turning up the skin covering its base as a flap. (Fig. 6.) The nail bed is then inspected. If pus

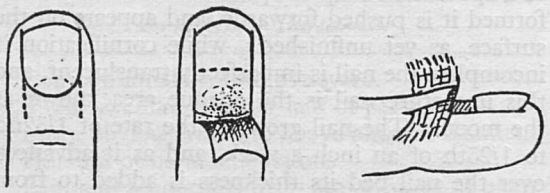

Fig. 6—Treatment of Paronychia.
(a) Incisions outlining flap.
(b) Flap turned back. Incision across nail.
(c) Proximal half of nail removed. Gauze strip under skin flap.

only extends under one side of the nail, that side is cut away. If, as in most cases, the whole nail base is undermined, the proximal half should be cut away, leaving the distal half as a protection, which will later be displaced by the growth of the new nail.

2. *A subcutaneous whitlow* is a cellulitis of the finger. It usually follows a prick and affects the pulp of the distal phalanx, which is red, hot,

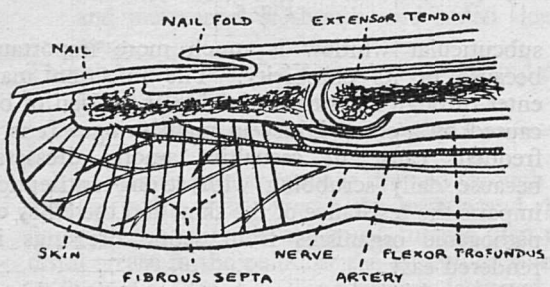

Fig. 7
Schematic longitudinal section of Terminal Phalanx.

swollen and painful, throbbing with the pulse. The swelling is limited to the last joint, movements of the finger are not resented, and there are no constitutional disturbances.

On the flexor aspect of the distal phalanx, the finger pad, the subcutaneous tissue is very abundant, and is divided by a number of strong fibrous septa, which radiate from the periosteum to the skin. (Fig. 7.) The distal four-fifths is a closed space, containing loose fat, which therefore fluctuates. When an inflammatory exudation occurs in this space, it cannot escape, and the tension rises rapidly, obstructing the blood supply.

The terminal phalanx should always be opened by a horse-shoe shaped incision, parallel to the nail, and just anterior to it. (Fig. 8.) In mild

Fig. 8—Incision for Subcutaneous Whitlow.

cases only one side of the horse-shoe need be incised. This incision divides all the septa going from periosteum to skin, and therefore completely relieves the tension in the "closed space"; it passes behind the digital nerves; it cannot injure the tendon sheath or the periosteum, and it leaves a scar which is not on the site of pressure.

3. *A thecal whitlow* is commonly a sequel of a pulp infection. The pus reaches the tendon sheath by direct extension, by lymphatic spread, or by infection with the point of the knife when the obsolete mid-line incision has been employed to open a subcutaneous whitlow.

4. *A sub-periosteal whitlow* is usually the result of interference with the blood supply in the terminal phalanx, following an infection in the closed space; this necrosis rarely affects the base of the phalanx, because this receives its blood supply from the artery before it enters the closed space. Thecal whitlow and suppurative arthritis, which is itself usually secondary to a thecal whitlow, may lead to osteomyelitis of the phalanges.

Necrosis of the terminal phalanx should not occur if pulp infections are widely opened at an early stage by the horse-shoe incision. Prolonged suppuration after drainage suggests bone disease, and the diagnosis is confirmed by the probe and X-ray. Usually all that is necessary is to remove a loose sequestrum representing the diaphysis of the phalanx, the base and joint being healthy. The final result of sequestrectomy is, however, apt to be unsatisfactory, because the nail bed

remains deformed, and disarticulation at the distal joint will be required after the sinus has healed. When a horse-shoe incision has been employed, the palmar flap required to cover the end of the finger is healthy and unscarred.

I should like to recapitulate some of the points in the differential diagnosis of infections of the fingers in tabular form.

DIFFERENTIAL DIAGNOSIS IN FINGER

Lymphangitis.	*Thecal Whitlow.*	*Subcutaneous Whitlow.*
Constitutional symptoms vary with infection.	Constitutional symptoms present.	Constitutional symptoms usually absent.
Whole finger red, hot, swollen.	Whole finger swollen, especially on flexor aspect.	Swelling limited to pulp of last phalanx.
Whole finger feels stiff and burning.	Constant severe deep pain.	Last joint throbs with pulse.
Dorsum of hand œdematous.	No œdema of dorsum.	No œdema of dorsum.
Lymphangitis along arm.	No lymphangitis.	No lymphangitis.
Glands swollen and tender.	No glands.	Usually no glands.
Tenderness not limited.	Tenderness limited to line of sheath.	Tenderness limited to pulp.
Movement within moderate range does not increase pain.	Finger held half flexed. Active movement and passive extension cause pain.	Movement of finger not resented.

THE NEGLECTED SEPTIC HAND

It is unfortunate that even to-day we often see the infected hand at a late stage, after it has been nursed for days, or even weeks, at home, or treated ineffectively by timid or incorrect incisions. Sheaths and connective tissue spaces are involved, and the barriers of these have burst so that the whole hand has become a bag of pus. Knowledge is essential for the correct drainage of these lamentable lesions, but at the best we cannot often do more than save the patient's life and his hand. Disability is bound to remain. The bursæ and tissue spaces must be opened on anatomical principles, wide incisions must be made on either side of the wrist behind the tendons and vessels to drain the space of Parona, strips of rubber must be put in, and the hand and arm placed in hot baths of hypertonic saline or sodium sulphate.

When dealing with what we may call the "Pat and Sam hand," one that is bound to be stiff, we must remember the orthopædic principle that a small amount of movement in an ankylosed joint may be quite valueless in one position, but very useful in another. This small useful movement will not only allow the patient to do something with the joint, but by encouraging voluntary use will eventually increase the range to an extent that cannot be predicted. The optimum position for ankylosis of the hand is one with the wrist dorsiflexed 45°, the metacarpo-phalangeal joints flexed 45°, the fingers bent in an arc of a circle of three inches radius, and the thumb fully opposed. (Fig. 9.) In this position, even though all the tendons have sloughed, and all the joints are fixed by fibrous ankylosis, the thumb and finger tips can still be brought together to pick up small objects, and the hand can grasp a ball or the handle of some larger implement.

To maintain the hand in this position of function it is sufficient during the period in which frequent dressings are necessary to rest it upon a ball of sterile dressings, taking care that the thumb is allowed to come forward; later it may be bandaged to a short cock-up splint, which comes no further than the distal transverse crease in the palm and

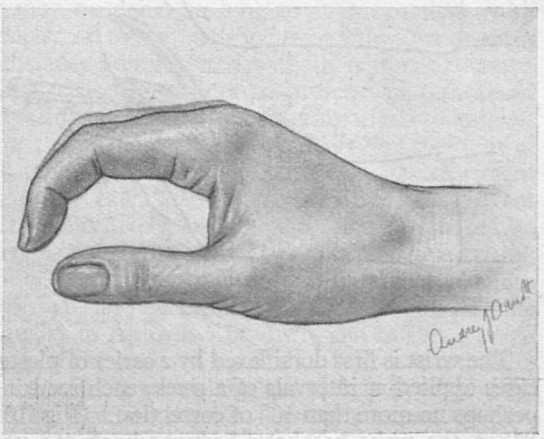

Fig. 9—The position of function in the hand.

allows the thumb to assume a plane anterior to the fingers, or, better still, to a moulded plaster slab, which maintains the optimum position in all its joints. All other splints should be avoided, and particularly the straight wooden splint, and that atrocity of the splint shop and makers' catalogue, the long cock-up shaped like an angled tennis racket, a device that fixes the fingers in line with the metacarpals and the thumb in line with the fingers.

The flat hand is evidence of neglect, not only during the period of infection, but that of splinting. The wrist is straight, the fingers straight, the thumb straight, adducted, and in the plane of the fingers. Such a hand is useless for anything but the Hitler salute; it presents a difficult but not quite hopeless problem. Dense fibrous adhesions cannot be snapped by manipulation under anæsthesia; they may be torn if sufficient force is used, but this only leads to hæmorrhage, effusion, pain and, ultimately, to a fibrosis even more dense. They may, however be stretched gradually till the stiff hand is brought into the position of function.

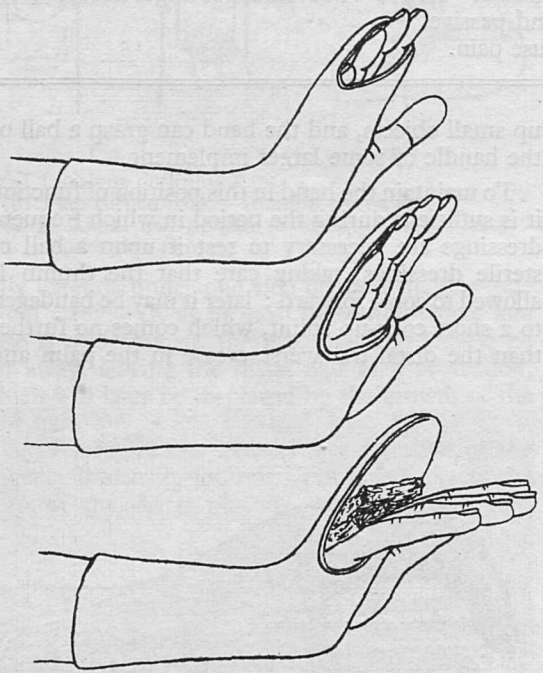

Fig. 10

The wrist is first dorsiflexed by a series of plaster cases applied at intervals of a week, each securing perhaps no more than 10° of correction. (Fig. 10.) When the wrist has been brought back 45°, the metacarpo-phalangeal joints are flexed by cutting away the plaster in front of the fingers, and putting in wedges of felt between the dorsal part of the splint and the back of the phalanges. (Fig. 10.) The fingers are next brought into a curve by the pull of elastic tapes tied to the fingers of a glove. (Fig. 11.) The thumb is pulled forwards by

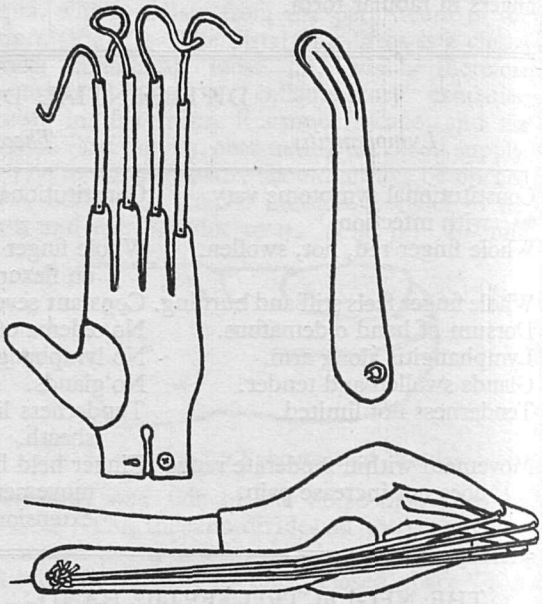

Fig. 11

spring traction to a rod embedded in a plaster cock-up. (Fig. 12.) Once the position of function

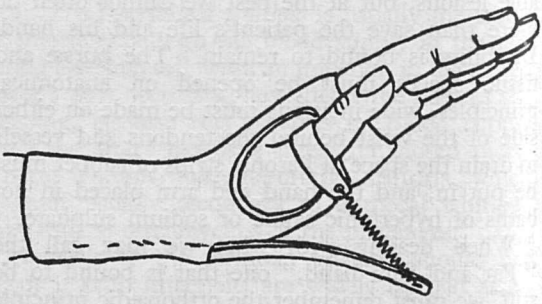

Fig. 12

has been obtained, the curative effect of attempted voluntary movement is brought into play. The hand can hold large objects and pick up small ones, and it can wield pen or brush.

Vivisection and the Legislation which Governs its Practice

A Paper by F. L. Lees, Esq.

THERE are many who suppose that vivisection consists of the unrestricted mutilation of our dumb friends by persons who gratify their twisted instincts in a sadistic frenzy and the sacred name of medicine; it is further supposed that a degenerate State, tolerant of venality and guilty of cupidity, not only turns a deaf ear to the piteous exclamations of the poor tortured creatures, but even extracts a substantial profit from these despicable practices by licensing the tormentors. This is only partly true.

At law, the mere infliction of pain upon an animal is neither legal nor illegal; the circumstances are the sole criteria. From the earliest times men have castrated horses to make them less dangerous, branded them that they be easier known, and broken them in to render them tractable; they have loaded them with armour and set them in the forefront of the battle, or harnessed them to guns and driven them through shot and shrapnel. All this has been done in the name of necessity—that is to say, man's necessity.

At the present day the whole subject is regulated by three Acts of Parliament. Of these the most comprehensive is the Protection of Animals Act, 1911. This monumental Statute applies to all domestic and captive animals, but not to wild animals unless they are in captivity or confinement. Even this apparently clear-cut distinction broke down when a school of bottle-nosed whales swam of their own accord towards the shore at Galval, near Penzance, and were inadvertently stranded by the ebb of the tide. The curious spectacle of these abandoned monsters attracted to the place a crowd of inquisitive natives, one of whom, a slaughterer named Rogers, drew a clasp-knife from his pocket and inflicted several wounds upon the face and belly of one of the whales. The creature bled freely, but was unable to express dissatisfaction at this treatment, except that it flapped its tail. Subsequently, at the flood of the tide, the rest of the whales were refloated and swam away, while the wounded whale was observed to sink, and, although it was not seen again, it was presumed to have died. Rogers, charged before the local magistrates with cruelty, asserted that he had sought to kill the animal in order to put it out of its misery. The magistrate decided that a slaughterer must have known that such superficial wounds as he had inflicted could not immediately despatch the whale, and accordingly convicted him. Rogers appealed to the High Court, which quashed the conviction on the grounds that the animal was not in captivity.*

Under this Act it is a statutory offence to "beat, kick, ill-treat, over-ride, over-drive, torture, infuriate, or terrify any animal," and whether by commission or by omission (such as by permitting cows to become over-stocked with milk). Some degree of ill-will or negligence must be apparent in the offender, or the crime is not complete. It is also an offence without any reasonable cause or excuse to administer poisonous or injurious drugs or substances to any animal, or to perform an operation upon one without due care and humanity. The Act does not affect anything which may be done in coursing or in the destruction or preparation of animals for food, so long as these processes do not cause unnecessary suffering.

The Act does not attempt to give any definition either of pain or of any of the prohibited methods of inflicting it. The casuist may hope to escape judicial stricture by a metaphysical distinction between pain and sensation; pain can be pleasant, he argues, calling the witness de Sade to give evidence, and cries of anguish are in themselves no criterion, for the insensitive mandrake is said to scream when hurt. But he would do well to remember that magistrates set more store by the attitude of "the ordinary reasonable man" than by technical distinctions that do not concern points of law, and that the judges of the High Court respect what the magistrates "find as a fact."

It is noticeable, too, that this Act contains no prohibition against the mere killing, as such, of any animals, wild or captive, however wantonly it may be done, so long as it is not done with cruelty or by any poisonous or injurious drug or substance administered without reasonable cause. Thus there is nothing to prevent an unlicensed experimenter from administering meals to animals (for the purpose, perhaps, of X-raying them, or of observing gain in weight), so long as the experiment is not "calculated to give pain" (*i.e.*, is not reasonably likely to give pain), and so long as no drug is fed to the animals. This principle applies to any such treatment of any animal, though whether an experimenter licensed under the Cruelty to Animals Act, 1876, can in this way go beyond the terms of his licence is not clear; there have been cases on the point, but probably the better view is that his licence is primarily per-

**Steel v. Rogers.* 1911. 106. L.T.R. 79.

missive and not restrictive, so that he is not robbed of his rights as an unlicensed person.

By the Animals (Anæsthetics) Act, 1919, it was directed that certain operations on horses, cats, dogs and bovines must be performed under anæsthetic—general in the case of ovariotomy, scrotal and inguinal hernia, and the fistulous withers, and local when neurectomy or umbilical hernia (*inter alia*) were being done.

But both these Acts expressly limit their application to circumstances which are not covered by the Cruelty to Animals Act, 1876—the rock on which vivisection in this country is founded and to which it is chained.

It was thereby enacted by the Queen's Most Excellent Majesty that a person should not perform on a living animal any experiment calculated to give pain, except subject to the restrictions imposed by that Act, but the Act did not apply to invertebrate animals. The prescribed restrictions are comprehensive and precise. "Experiment," in the first place, is made to include operations not only to discover results, but also to verify them. The operator must be licensed by the Home Secretary, and must employ anæsthetic throughout the whole of any experiment, unless especially permitted to dispense with it; curare is specifically declared by the Act not to be deemed an anæsthetic. Furthermore, if the animal is likely to suffer any pain on regaining consciousness, it is to be killed whilst still anæsthetised. The licensee must not perform his operations in public (whether gratuitously or not), nor even to illustrate lectures in a medical school, nor to attain manual skill. These strict conditions may be modified by certificates which the Home Secretary has power under the Act to grant to licensees; these certificates deal with the classes of animals which may be used (thus, the equidæ, dogs, cats and bovines receive preferential treatment and may only be operated on if the experiment necessarily requires the use of them), the type of operation which may be performed, and the conditions under which it is to be carried out. The regulations are exact, and must be faithfully obeyed; operators are required to keep an accurate account of the animals with which they deal, and their notes are open to perusal by Home Office inspectors. If an operator exceeds the terms of his licence or certificate, even though the experiment, though different from what was authorised, is slighter in effect, he will be reprimanded and be in jeopardy of having his licence withdrawn. A man may, however, have more than one certificate under his licence, so as to enable him to cover a large field of investigation; even so, each experiment must in some way be duly authorised. Both the licence and the certificates are issued without fee.

But the operator obtains one valuable concession: he is immune from prosecution under the Act (and, so far as they affect vertebrates, under the other two Acts) at the instance of anybody who has not the assent in writing of the Home Secretary.

It would be contrary to the established traditions of English legislation if these statutes, which comprise almost all the law of this country relating to cruelty to animals, did not display some odd anomalies.

First, it is significant that the first Factory Act regulating the hours for which women and children under thirteen could be employed in factories and workshops was not passed until 1833, and the Children's Dangerous Performances Act until 1879; but the first Act suppressing cruelty towards animals became law in 1822. The R.S.P.C.A. came into being in 1824, and between 1835 and 1876 secured 28,209 convictions. Women and children were not always first.

Secondly, it may be observed that the Acts (especially those of 1876 and 1919) are particularly solicitous towards horses (which the 1919 Act quaintly declares to include mules, jennets and donkeys), dogs, cats and bovines; of all our dumb friends these in particular deserve the title of Friends of Man. Yet man's closest relatives, the chimpanzee, orang-outang, gorilla and the other apes are left in the outer darkness with the rest of the vertebrates.

Lastly—and perhaps this is the greatest anomaly of all—there is the matter of the invertebrates. These little creatures appear to the lawyer to enjoy an even greater immunity from pain than the vertebrates, for they come within the scope of the 1911 Act, which prohibits cruelty to any animal, captive or domestic, and yet they are excepted from the Act of 1876, which permits a measure of cruelty. Thus it is not permissible in any circumstances to inflict pain on an invertebrate, nor to administer a drug or noxious substance to it. Yet is there any among us who, when a schoolboy, has not coaxed a fluttering puss-moth into a jam-jar killing-bottle and stupefied the unhappy thing with cyanic fumes contrary to the Statute in that case made and provided, and to the peace of our Sovereign Lord the King, His Crown and Dignity?

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Recent Advances in Anæsthesia and Analgesia. By C. LANGDON HEWER, M.B., B.S., D.A. Second Edition. Pp. 272.

Recent Advances in Orthopædic Surgery. By B. H. BURNS, B.Ch., F.R.C.S., and V. H. ELLIS, B.Ch., F.R.C.S. Pp. 283.

Published by Messrs. J. & A. Churchill, Ltd. *Price* 15*s.* each.

WE have always felt that the "Recent Advances" series fulfil a definite need in medical literature, for there are few branches of medicine that can be said to be in any way stationary, and the price of producing, as well as buying, standard textbooks often makes it impossible for them to be revised more frequently than every five or six years. Thus, unless students and practitioners are willing, and have the necessary time to spare, to read through all the important journals, it is impossible for them to keep apace with every new advance made, even in one particular branch of medicine.

Therefore it was with more than usual interest that we welcomed these two additions to this popular series, for in them we hoped to find a concise epitome of the latest work on two very important subjects.

The volume on anæsthesia, however, is disappointing, and we do not think that it is up to the general standard of the series. Much too much of the available space—and any synopsis must of necessity be limited as to space—is taken up with illustrations that are not particularly important, and, for the most part, consist of views of the controls of various machines for administering anæsthesia, the actual working of which is usually self-evident to anyone but the complete novice. There is a good chapter on Avertin and the basal anæsthetics, and the remarks concerning the resuscitation of patients who have collapsed, are both sensible and practical, but the two pages of print, which for this book is quite a long section, that have been devoted to the theories concerning Status Lymphaticus seem to us to have very little to do with anæsthetics at all, let alone their recent advances, and merely deal with a condition which to us has always seemed to be an unfortunate diathesis, existing in certain people, and which is occasionally brought to light by comparatively sudden death, such as may occur under anæsthesia.

There is quite a lot of sound information in the book, but all too few practical details, which we imagine must be the main requirement of the majority who read this sort of work, and if future editions are called for, we would suggest that many of the more useless illustrations should be omitted and an attempt made to offer some more of the author's experience of the practical side of anæsthetics, which, we are sure, must be immense. One thing, however, we commend very highly, and that is the full bibliography that is appended to every chapter, and which will be a great help to those anxious to read further into the subject.

The "Recent Advances in Orthopædic Surgery" is well written and arranged, and the authors have succeeded in compressing into the comparatively small space at their disposal a surprising amount of information, and we feel that it is a book that can be read both with enjoyment and advantage. The chapter on the growth and formation of bone, for which the authors apologise rather half-heartedly in their preface, gives a very clear and sane view of a much discussed subject, and should be of considerable value to candidates revising for examinations, as well as

to those who are merely seeking to keep pace with knowledge.

New growths of bone also have a prominent place in the book, and the text is illustrated with a series of excellent X-ray photographs, that must have been the cause of considerable pride in the hearts of their producers, and which are well worth looking at by themselves.

In all, though we would have liked to see more written about treatment, we can recommend this as a thoroughly sound and very readable book, filling a very definite gap in the series to which it belongs.

Sick Children: Diagnosis and Treatment. By DONALD PATERSON, M.D.Edin., F.R.C.P.Lond. Published by Messrs. Cassell & Co. Second Edition. Pp. 600. *Price* 12*s.* 6*d.*

THIS is an excellent book, and one which can be confidently recommended to all who are interested in the study of the disease of childhood as a mine of information, both simply written and well arranged.

The book starts with a section on growth, both normal and abnormal, which is admirably done, and is followed by a description of some of the commoner and more trivial disorders such as obesity, which are more often than not left out of books of this kind, despite the fact that they must be almost daily problems of any general practitioner.

Infant feeding, that well-known bugbear of examinations and a subject that may well have made the fortunes of many of the manufacturing chemists, is treated very fully, and in a manner that could hardly be bettered from the point of view of clarity. The sections on tuberculosis and rheumatic disease are also worthy of being studied by students and practitioners alike, while to the former the examples of examination questions included at the end of the book should prove invaluable for revision of the subject before attempting their final examinations.

The simple chemical test for Hodgkin's disease, which we cannot remember seeing described anywhere else, will, if confirmed, be a distinct advance in the diagnosis of this disease, at a time when it is perhaps hardest to recognise. However, in our opinion, one of the most useful and most informative sections of the book is tucked away just inside the cover, and consists of a table showing the normal composition of the blood, cerebro-spinal fluid, fæces, etc., in childhood—facts that are not often included in textbooks and which are frequently quite unknown to students. We recommend this book without hesitation.

The Original Papers of Richard Bright. Edited by A. ARNOLD OSMAN, F.R.C.P. Published by Humphrey Milford (Oxford University Press). Pp. 171. *Price* 21*s.*

THIS volume consists of a series of case histories and post-mortem findings illustrating Bright's conception of the relation between albuminuria and kidney disease, the second Gulstonian Lecture on "The functions of the abdomen and some of the diagnostic marks of its disease," and an appendix reporting on the microscopical findings of some sections which were made recently from Bright's original specimens in the Gordon Museum. This last is the only original material in the book, and tells us that the tissues of these specimens are in a remarkably fine state of preservation, and that their appearance corresponds with Bright's description of them; a fact which is hardly startling if the reader has learned anything of the meticulous care and accuracy with which this remarkable man described everything he saw.

The text of Bright's case notes and description are interesting, even if the constant repetition of the same facts and deductions throughout the whole series of cases is apt to become tedious, and we feel that we can do no better than to quote Sir William Hale-White's appreciation of this very series of papers, which appeared in the *Guy's Hospital Reports* of January, 1921:—

"Assuredly this is one of the most wonderful series of papers in medical literature. A disease, which presents symptoms of derangement of almost every organ in the body, is unerringly ascribed to the kidney. We are shown how to diagnose it. Its causes, its symptoms, its treatment and its post-mortem appearances are given with such a completeness and accuracy that, after nearly a century, no error has been detected in Bright's description, and, if we except a few facts that have been gleaned by instruments he did not possess, nothing of importance has been added."

This tribute we would endorse, and though we would hesitate before describing albuminuria as a symptom, as Bright does in his tenth case for the second paper, we liked the old-world air of importance that was attached to everything that was done, from the exhibition of "the little squill pill" to the ordering of a pork chop.

However, valuable though these papers may be to the student of medical history, or as a monument

to patience, we cannot recommend this volume as a book for students, but rather as one that might well be kept as a work of reference in medical libraries.

Surgical Anatomy. By GRANT MASSIE, M.B., M.S., F.R.C.S. Published by Messrs. Churchill & Co. Third Edition. Pp. 451. *Price* 15*s.*

AMONG the grosser anatomical structures there is little room for doubt or confusion. A structure is either present or absent, and that is all there is to it, but we suppose, lest the subject should appear altogether too easy, the nomenclature has been made just the reverse of simple and in spite of frequent attempts to straighten out the tangle, the confusion of terminology is just as great to-day as it was when the Basle Nomina Anatomica started.

This terminology of anatomical structures, though it has been taught widely in anatomical schools, never seems to have appealed to surgeons, and consequently for a long time students and surgeons have been referring to the same structures by entirely different names, and more lately still, as if to complete the chaos, a third terminology has been produced which seems to be a mixture of the two.

To this unfortunate state of affairs there seems no immediate solution, and it must add greatly to the difficulties of writing a book on surgical anatomy, which can be understood by students who, having learned one set of names in the Dissecting Room, are now trying to learn anatomy by an entirely new set of names, for the purpose of passing a surgical examination. However, Mr. Grant Massie, in the third edition of his well-known book on surgical anatomy, gets over the difficulty by adopting the intelligent compromise of using the so-called old terminology—the language of surgeons—and putting the names suggested by the B.N.A. in brackets. This seems the most sensible way out of a difficulty that nothing but the instant death of either all surgeons or else all anatomists seems capable of solving.

Like its two predecessors, this third edition consists of a pleasant and readable mixture of the elementary anatomy of the various regions of the body, together with an account of such points of surgical importance that are definitely referable to the anatomy of the part in question, and offers a simple, yet interesting, way of revising anatomy for a surgical examination.

The text is clear and free from unnecessarily detailed information, whilst for the most part the illustrations are both accurate and attractive, and one of these in particular we are glad to see has been altered since the last edition of the book; that is the drawing of a dissection of the muscles of the neck, which now appears on page 80, and which in the last edition purported to show the body lying prone on its back—a feat which we thought only lady novelists expected of corpses.

However, that is but a triviality, and the book as a whole has always been one that is well worth reading and of especial value to those who are shortly to attempt the surgical part of their final examinations. To them we would have no hesitation in recommending it.

A Manual of Radiological Diagnosis. By IVAN C. C. TCHAPEROFF, M.A., M.D., D.M.R.E. Camb. Published by W. Heffer & Sons, Ltd., Cambridge. Pp. 250. *Price* 21*s.*

THERE are very few books indeed that can be recommended wholeheartedly both for the fact that they are interesting and instructive, and because they fulfil a definite need. However, Dr. Ivan C. C. Tchaperoff, in his "Manual of Radiological Diagnosis," has filled a wide gap in medical literature by providing, in a single volume, a lucid account of the radiological features of the important systems of the body, together with a series of photographs which, as well as illustrating his text, form a permanent record of the X-ray appearances of the various lesions, which should be invaluable as a standard for comparison.

In this way we feel that he has produced something that will be of very great help both to general practitioners and students, as well as many others who are not completely absorbed in a speciality, and has done something to mitigate the lamentable lack of teaching offered in this important branch of medicine.

Mr. Philip H. Mitchiner, in his foreword to the book, says: "There is, as far as I am aware, no similar publication, and every medical practitioner will find extremely useful the brief but comprehensive descriptions of both the anatomy and X-ray appearances of injuries and diseases throughout the whole human system; while the production of X-rays themselves is so excellent that they may safely serve as a standard with which to compare any X-ray photograph, of which the diagnosis is doubtful."

With this we are in complete agreement, and have no hesitation in recommending this book to anyone interested in the subject.

The Emancipist. An Historical Drama in Three Acts. By Major-General JOHN MACQUARIE ANTILL, C.B., C.M.G., and his daughter, ROSE ANTILL DE WARREN. Published by Messrs. Angus & Robertson, Sydney; Australian Book Co., 37, Great Russell Street, W.C.1. Pp. 165 *Price* 3*s.* 6*d.*

THIS is a play about Dr. William Redfern, the first Medical Graduate in Australia, written by two of his descendants. Dr. Redfern's life provides a not ungenerous theme for a play, though one rather difficult to manage. An assistant surgeon in the British Navy in 1797, he protested against the conditions under which the ratings were made to live; for his indiscretion in a moment of hot-headed idealism, when he declared that the mutineers at the Nore had his sympathy, he was sentenced to death. This sentence was commuted to one of imprisonment for life, and after four years of Dartmoor, Dr. Redfern was transferred, on his own petition, to Botany Bay. A series of fortunate coincidences enabled him to show his medical skill, and as the result of good work he was finally granted a free pardon and thereafter set up in practice in Sydney. He and the other Sydney emancipists were further fortunate in that the famous Governor Macquarie, the first person of consequence to recognise them on a level social footing, was then in office. Helped by this recognition, Dr. Redfern became a person of importance not only in the city but in the history of Australia, and is presented in the play as something of a national hero. Many historical personages of the time are presented: Governor Macquarie himself, Major Antill, Colonel Foveaux and the Rev. Henry Fulton, who had been asked by the Bishop of Derry to transport himself, in default of being unfrocked, because of his association with the rising at Killaloe.

The play is not without a certain rude vitality; the characters at times are real enough, and a high pitch is reached with Governor Macquarie's speech, in which he visualises the great future that he sees before the country. It is at the same time written with a remarkable *naiveté*, the comic relief is paltry, and the stage devices very obvious. Dr. Redfern himself, apart from his hot-headed outbursts, is a good man with all the insipidity which tends to be the attribute of the righteous. His mother, who appears for a few moments in Dartmoor Prison, resembles one of the nobler characters in the Fairchild Family. In the last scene Dr. Redfern rather melodramatically relieves himself of his mother-fixation and becomes engaged to a daughter of the Sydney aristocracy, thus discomfiting his last remaining enemies and proving his emancipation beyond the last lingering doubt.

The play, though distressingly crude at times, has enough life to make it commendable to any who are interested in Australian history.

M. P.

Our Rheumatism. By OSCAR PARKES, M.B., Ch.B. Published by Messrs. Sampson Low. Pp. 106. *Price* 5*s.*

DR. PARKES is of the view that the prevailing ignorance and confusion on the ætiology and treatment of rheumatism is a reproach to the profession. If one accepts this view, and one is not ready to quarrel with it, one is still uncertain as to how far this book has gone to improve the situation. It is written for the intelligent layman, though how far it will be intelligible is a matter for conjecture, and it does not seem to add very much to the existing knowledge of either the ætiology or the treatment of the conditions with which it deals. The main planks in Dr. Parkes' conception of the ætiology of rheumatic diseases are the presence of, firstly, a rheumatic diathesis and, secondly, excess of lactic acid.

The writing is of a bald and general character, the descriptions of the various manifestations of "rheumatism" vague, and, as might be expected of a book on a complicated subject written for the uninitiated, the whole thing is sketchy and at times inaccurate. One doubts if the work will clarify the minds of many laymen, and one does not think it is valuable as a book of reference. It may, however, prove a godsend in hotels at Harrogate, Cheltenham, Droitwich and elsewhere, when the residents, having exhausted their symptoms, have to grope for further topics of conversation.

The Common Neuroses. By T. A. ROSS, M.D., F.R.C.P. Published by Edward Arnold & Co. Second Edition. Pp. 236. *Price* 10*s.* 6*d.*

THIS seems to us so good a book that one is surprised that there have not been more than two editions since it was first published in 1923. The book is exceedingly well written, and bears the stamp of a scholarly mind accustomed to the processes of accurate thought and self-expression. The opening chapters are devoted to the ætiology and classification of the psycho-neuroses; the greater part of the subject matter deals with the anxiety reaction, its differential diagnosis and its treatment; the hysterical reaction and the obsessive and compulsive neuroses are more briefly treated, and the book ends with a chapter on the possibilities for treating such milder forms of manic depressive psychosis as may be met with in general practice.

It is an eminently readable work, written with erudition and clarity, and lightened by case histories which are both instructive and entertaining. It would be an unduly exacting critic who was disappointed by this book.

Diseases of the Eye. By EUGENE WOLFF. Published by Messrs. Cassell & Co. Pp. 226. *Price* 15*s.*

THIS book, by the author of "The Anatomy of the Eye and the Orbit," should prove most acceptable to students who are attempting in a comparatively short space of time, to grasp the fundamentals of a subject which confounds many in a final examination. It will also be found of value to the practitioner who, while having no wide experience in eye diseases, is anxious to treat the commoner conditions himself rather than refer them always to an ophthalmologist. It forms, therefore, a satisfactory compromise between the fragmentary accounts of ophthalmology found in the standard surgical textbooks, and the more ponderous volumes devoted to its detailed study.

Into its 226 pages an extraordinary amount of information has been packed. The individual chapters are well set out, and classification is clear, the less important considerations being relegated to smaller type.

Physiology and Optics are almost entirely omitted, and Anatomy is only represented by selected diagrams and drawings, but the more important ophthalmic conditions are adequately, if rather shortly, discussed. Refractions are somewhat cursorily dealt with, but squint has been set forth fairly fully, and there is a concluding chapter on the commoner operations of ophthalmology containing some useful notes on After-treatment.

The illustrations, which might perhaps be more numerous, are on the whole good—those borrowed from "The Anatomy of the Eye and the Orbit" being quite excellent, but some of Hamblin's and Head's drawings in colour of external appearances would have been better had they been twice the size.

Altogether this is a book that can be recommended, especially to the beginner.

A. L. Y.

What is Osteopathy? By Dr. CHARLES HILL, Deputy Medical Secretary, British Medical Association, and Dr. H. A. CLEGG, Deputy Editor, *British Medical Journal*; with a Preface by H. G. WELLS. Published by Messrs. J. M. Dent & Sons, Ltd. Pp. 212. *Price* 7*s.* 6*d.*

OSTEOPATHY, chiropraxy, naturopathy, homœopathy, naprapathy—what do we know of such things? We of the straight and narrow path of "allopathy" do not bother our heads about such cults, with the very natural result that they flourish like so many bay trees. We may from time to time be somewhat annoyed to find that our patients and lay friends think "that an osteopath is a specialist in bone disease," or that "a homœopath is simply a doctor who has specialised in pharmacology," but, generally speaking, we have manged to ignore, with a sublime indifference, the existence of these forms of vegetation which sprout on every side of us. Indeed, so Olympian is our scorn that few of us have even the most rudimentary ideas of what the various "—pathies" stand for—an attitude which is, perhaps, commendable to the purist, but which is certainly suspect to the mass of our patients, who consider, rightly, that we should be informed as to the theories and practice of the various systems of medicine in existence. Drs. Hill and Clegg have set out to remedy this ignorance in so far as it applies to osteopathy, and they have succeeded very well indeed. In 212 pages they have traced its history from its foundation by that mystical muddle-headed gentleman Andrew Taylor Still, who, like other founders of cults, claimed its divine origin, through the succeeding years when its devotees were making vain efforts to drop the pilot and bring osteopathic ideas into line with modern physiology without altogether discarding its *raison d'être*, to the present day, when they are pressing for the official recognition of some two thousand osteopathic practitioners in the British Isles.

The authors have carefully and fairly examined the osteopathic postulates and theories, and, wherever possible, attempted to discuss the probable truth or error contained in these. That mysterious entity, the osteopathic lesion, is sought and searched for with as much assiduity as was the Snark, and with much the same result.

One regrets that the authors did not devote more of their space to an explanation for the remarkable success of osteopathy both here and in the U.S.A. Of course, chronic invalids must have someone to go to when we have done our best for them, and have failed to cure, and no doubt this fact will in part account for the present boom in quacks. Here in England, however, there is another and more telling cause, which lies in the strong desire of most Englishmen to support any body of persons who are fighting against the powerful and vested interests of an orthodox and closed profession. Such a body are the osteopaths thought by many to be. This view is founded on the curious error that the medical profession is dogmatic, while the quack and innovator is a liberal individual fighting for freedom of thought.

Of course this is nonsense, as we all know. The medical student spends the first half of his training studying pure science, and during the second half in the wards over ninety per cent. of his time is occupied with pathology, ætiology, differential diagnosis, etc.—subjects in which dogma holds no part. Osteopathy, on the contrary, is *per se* dogmatic; it is tied to the dogma of Andrew Taylor Still.

The authors have done the public and the medical profession a real service in writing this book, and exposing what is clearly shown to be an impudent ramp.

It should be read by every medical practitioner and by every medical student, and we suggest that the Wills Library could with advantage possess a copy.

H. B. O. C.

Correspondence

Women Medical Students

To the Editor of the GAZETTE

SIR,—There is no need for me to proclaim my devotion to Guy's and to all that is best in the Guy's tradition, but I have always held that it is a bad thing for an institution to live too much and too long upon its traditions, and especially so when these include or encourage insularity or an inflexible conservatism.

I belong myself to a generation of editors of the *Gazette* who were regarded in their day as liberal and progressive. There have been conservative editors, too, within my memory, but I confess, Mr. Editor, to being appalled by reading, in the year 1937, a "Passim" so conservative, so ungenerous to women, and so Victorian as your last.

In an age in which every other civilised country, all the provincial universities in this country, and two London medical schools already educate men and women medical students together, you raise as an objection to such co-education the embarrassment of discussing delicate topics at the bedside! Perhaps, Sir, you have never noticed that the rounds in the wards are accompanied by a Sister or a nurse. Clearly you have not yet appreciated that it is inconsistent with the scientific outlook and with the breadth of view necessary for the doctor's calling to allow the emotion of squeamishness to influence judgment or to interfere with serious clinical discussion or instruction. If medical education does not rapidly eliminate false modesty of this kind it fails in one of its essential tasks. It would, in fact, be improper if doctors and students of both sexes were unable to discuss their problems freely and openly together.

If the presence of "medically-minded females," as you not very graciously describe your fellow-practitioners of the future, "will have a restraining influence on that free expression of thought which has always been a characteristic of the Dressers' Room," then I can only suppose that those thoughts are not such as you would like to voice among the women of your own family.

But, after all, these objections are almost too trivial for serious discussion.

I am fully aware that the present surplus of students prohibits immediate action, but on the matter of numbers I have already spoken my mind both before and since leaving Guy's. So long as the Medical School prefers quantity to quality and postpones the policy of a restricted entry, so long will it run a grave risk of losing its pre-eminence as the best clinical school in London. In Cambridge, where I am similarly exercised by the problem of numbers, I am finding it difficult, much as I would wish to do so, to urge the keener men to go to Guy's, where, I understand, there may shortly be as many as twenty on a medical firm.

I had thought the days of foolish anti-feminism were long past, and that a sense of justice might allow that six places annually for women students in a community of several hundred men, with the opportunity of sharing their first-class clinical training, was not an extravagant suggestion. I am sure the Massage School could provide the necessary cloak-room accommodation for so small a number. I have nowhere urged the conversion of Guy's to a mixed school in the fuller sense.

Although I do not anticipate early results, I have written to the Dean and am hopeful that the School Council will at least afford my modest proposal a full and free discussion.

Finally, Sir, I wish that you might make the acquaintance of some of the medical women whom I have been privileged to meet whether in practice or engaged in research, or other essential tasks: women whom I should have been very proud to have had as my students or contemporaries.

Yours, etc.,

JOHN A. RYLE.

Cambridge.

(We have often urged the policy of a restricted entry, but still believe that there are some institutions that, having been especially designed for male education, would lose much of their attraction if they admitted women students. Almost all of Professor Ryle's arguments above might well be used in demanding the admission of girls to Eton.—*Ed.*)

To the Editor of the GAZETTE

SIR,—It is customary for all who pretend an impartial attitude to a subject which cannot be viewed with strict impartiality to start their writings with a conviction that they are doing so "without pride or prejudice." It is with such an air that the Editor of the *Gazette* delivered himself of his thesis against the admission of women students to Guy's Hospital.

It is curious to note that throughout the two pages of ill-reasoned discussion, no sound arguments are advanced for this view except those which would appeal to such as are still imbued with a deep sense of prejudice against the opposite sex.

Throughout the article it is assumed that, by the use of the Royal "we," the whole of Guy's Hospital, both Staff and students, agree with this opinion. But may I suggest that there are a great number of students who applaud Professor Ryle's appeal, and wish that someone of his standing had spoken out before this date. This opinion is fortunately also held by many of the Staff, so that as an opinion of the expression of the students and Staff of this Hospital, the Editor is off the mark if he thinks he is stating the case on behalf of the whole Hospital.

The arguments used against the admission of women seem to take us back to the mid-Victorian days of ostrich-like innocence, when the legs of the pianos were covered because the showing of any part of the lower limb was considered immoral.

If, as is stated, the Hospital to-day is overcrowded, then it is high time that some form of quota should be applied; but it seems only fair that in England, where the sexes are still equal in the eyes of the law and have not yet been placed under the philosophy of "Kaiser, Kinder und Kiche"—as both our worthy Editor and Herr Hitler wish them to be—men should be treated equally with women. This would be much more in accord with British justice, and less with those anti-feminist sentiments which are now sweeping through Europe in a new wave of barbarism.

It seems strange, too, that in 1937, when co-education is an established fact, when lectures on "What every young man and woman ought to know" are given to mixed audiences, a statement to the effect that "whether or not medicine can be taught with advantage to a mixture of the sexes is still important even in these days" should appear in the *Gazette*. Ye gods! and these are the days when the works of Havelock Ellis and Freud can be seen in every public library! Why, for Heaven's sake, could not a Registrar or Physician teach the facts of physiology, anatomy, medicine, surgery or even obstetrics to a mixed class? Or does the Editor believe there is something shameful about these subjects which should not be mentioned except in hushed whispers?

Lastly, the intelligent woman—for she would have to be intelligent to get one of the six places in open competition with men—could provide something real and of value to the discussions in the Dressers' Room. Far from "having a restraining influence" there, the woman's point of view, which seemingly our worthy editorial staff so badly needs, would fulfil a need in those discussions, and add something to make the Hospital (as the students know it) a more civilised place.

Yours, etc.,

S. DAVIDSON.

The College,
Guy's Hospital, S.E.1.

(No attempt is ever made to persuade readers that the opinions expressed in "Passim" are representative of the Hospital as a whole. The plural is used, first of all, because it is an established convention, and secondly, because there happen to be two of us.

A letter of a similar nature has, we believe, arrived from one Potato Jones, but our space is, of course, limited.—*Ed.*)

To the Editor of the GAZETTE

SIR,—I was surprised at the tone of last week's "Passim," particularly in relation to the remarks about Dr. Ryle's letter in the *Telegraph*.

It is difficult to discuss this question of women students shortly, but there was an undercurrent of vulgarity and almost of animosity in the notes, which is surely regrettable. The question is primarily an economic one, and arguments as to the modesty of women, freedom of speech and sanitary arrangements in the College have no real bearing on the matter.

May I call attention to a very interesting description by Mr. Chapple in the current issue of the *British Medical Journal* of an unusual case of hermaphroditism. The discussion on the case has some bearing on the line taken in "Passim." I should like to quote just this:—

"Clinical observations have confirmed the belief that the pure male type and pure female type are seldom satisfactory, the former generally

being lacking in real intelligence and the latter in physical power. . . . The so-called war of the sexes is, therefore, as about as absurd as any other war. . . ."

Yours, etc.,

T. O. GARLAND.

23, South Hill Park Gardens,
N.W.3.

Physical Signs in Empyema

To the Editor of the GAZETTE

SIR,—My friend, Dr. R. E. Smith, writes that the essential difference between the lung of a child and that of an adult is its power to collapse. While not disputing that this difference exists, I would add that another important difference, having a definite bearing on the physical signs of pleural effusions, is the simple one of size. The child's lung is many times smaller than the adult's, and the stethoscope is consequently always nearer to the source of sound. If the lung conditions which determine bronchial breathing are present, the sound will always be better heard in a child than in an adult, whether effusion is present or not.

I venture to think that Dr. French's dictum that " the signs of fluid are the signs of consolidation " is very misleading—at any rate to the student. I would agree that the signs of fluid may be modified by consolidation of the underlying lung just as the signs of consolidation may be modified by the presence of fluid.

When I was a medical registrar I always found that students had some unaccountable difficulty in understanding the simple acoustics of pulmonary signs, and, if I understand Dr. Smith aright, I am not sure that he has properly explained the phenomenon of diminished or absent breath sounds in effusion, although he recognises the apparently paradoxical fact that fluid is a better sound conductor than air. May I briefly recount what I used to teach and, strangely, still believe ?

The breath sounds, like the voice sounds, arise mainly in the larynx. They are conducted along the bronchi and the vibrations are transmitted to the ear through the pulmonary tissue and the chest wall. There are two principal factors which modify the sound in its passage from larynx to stethoscope—diffusion and reflection. Diffusion diminishes intensity just as the ripples caused by a stone dropped into a pond gradually disappear as they travel outwards. The intensity is halved in spreading from a sphere of a given size to one of double the size. Reflection occurs as the sound waves pass from a medium of light density to one of heavy density, or *vice versa*. The lung-chest wall junction is, therefore, a point of reflection, and there will be a loss of sound as the waves pass from one medium to the other.

Now for fluid. Fluid is a good conductor. Try it in your bath ! With your head under the water the drip of the tap, previously inaudible, will be loudly heard. But sounds arising out of the water, *e.g.*, the breakfast gong, will not be heard at all. Why is this if water conducts sound better than air ? Because the waves set up by the vibration of the gong are reflected at the surface of the water, there being a great difference in density between water and air.

Let us return to the chest. If an effusion is present the amount of reflection at the lung-fluid surface will depend upon the difference in density between the lung and the fluid. If the lung contains air the difference in density is great and the sound loss correspondingly large. If the lung is solid, whether from collapse or inflammatory consolidation, the densities will be less unequal and the sound loss consequently less. Sound will also be lost at the reflecting plane between the fluid and the chest wall, but here the inequality of density is not so great as between air containing lung and fluid.

To go back to the child with empyema, the reason that we so frequently hear bronchial breath sounds is, first, that the chest is small and the sound loss from diffusion much less than in the adult. Also, if the lung is solid, the loss of sound from reflection is minimised. But it would be a mistake to imagine that all children with effusions have bronchial breathing ; all that one is justified in saying is that bronchial breath sounds are commoner in children with effusions than in adults. Nor must it be assumed that it is always due to collapse of the underlying lung. Particularly in empyema it may be due to the presence of pneumonic consolidation — the so-called syn-pneumonic empyema—which is always an indication to postpone operation and aspirate. I think this is the most important point in relation to empyema that I have learnt since I was a student, and, while agreeing with Dr. Smith that a child may harbour an empyema too long, I have come to believe that delayed diagnosis is a lesser evil than precipitate operation.

Yours, etc.,

MAURICE E. SHAW.

Recent Additions to the Wills Library

Bailey (Hamilton): Clinical Surgery for Dental Practitioners. Lewis, 1937, pp. 156.

Bainbridge (F. A.) and Menzies (J. Acworth): Essentials of Physiology. Edited by H. Hartridge. 8th edn. Longmans, 1936, pp. 651.

Beust (Theo. B.): Dental Histology and Embryology. Saunders, 1934, pp. 170.

Blacker (C. P.): A Social Problem Group. Oxford U.P., 1937, pp. 226.

British Medical Journal: Treatment in General Practice: The Management of some Major Medical Disorders. Vol. 2. Lewis, 1936, pp. 426.

Bunting (Russell W.): Oral Hygiene and the Treatment of Paradontal Diseases. Kimpton, 1936, pp. 187.

Burns (B. H.) and Ellis (V. H.): Recent Advances in Orthopædic Surgery. Churchill, 1937, pp. 296.

Claxton (E. E.): Weight Reduction Diet and Dishes, With Recipes by Lucy Burdekin. Heinemann, 1937, pp. 199. (*Presentation.*)

Cooper (Sir Astley): Lectures on the Principles and Practice of Surgery. 8th edn. Lond., 1835, pp. 612. (*Presentation.*)

Cooper (Samuel): The First Lines of the Practice of Surgery. 6th edn. Lond., 1836, pp. 744. (*Presentation.*)

Cunningham's Textbook of Anatomy: Edited by J. C. Brash and E. B. Jameson. 7th edn. Oxford U.P., 1937, pp. 1506.

Dilling (Walter) and Hallam (Samuel): Dental Materia Medica, Pharmacology and Therapeutics. Cassell, 1936, pp. 328. (Additional copy.)

Ellis (George Viner): Demonstrations of Anatomy, being a Guide to the Dissection of the Human Body. Lond., 1840, pp. 620. (*Presentation.*)

Fairbrother (R. W.): A Textbook of Medical Bacteriology. Heinemann, 1937, pp. 437.

Fleming (E. Kaye Le): An Introduction to General Practice. Arnold, 1936, pp. 150.

Gunn (J. A.): An Introduction to Pharmacology and Therapeutics. 4th edn. Oxford U.P., 1934, pp. 237.

Hewer (C. Langton): Recent Advances in Anæsthesia and Analgesia. 2nd edn. Churchill, 1937, pp. 187.

Hussey (Edward L.): Cases in Practice—Reports, Letters and Occasional Papers. Oxford, 1882, pp. 418. (*Presentation.*)

Kennedy (Edward): Partial Denture Construction, Dent. Items Interest. 1932, pp. 472.

Langdon-Brown (Sir Walter) and Hilton (Reginald): Physiological Prinicples in Treatment. 7th edn. Baillière, 1936, pp. 308.

Lees (David): Practical Methods in the Diagnosis and Treatment of Venereal Diseases. 3rd edn. Edited and Revised by Robert Lees. Livingstone, 1937, pp. 608.

Lever (John C. W.): A Practical Treatise on Organic Diseases of the Uterus—Fothergillian Prize Essay, 1843. Lond., 1843, pp. 240. (*Presentation.*)

Levine (Samuel A.): Clinical Heart Disease. Saunders, 1937, pp. 445. (Hunt Memorial Library.)

Lister Centenary Exhibition Handbook, 1927; Wellcome Foundation, 1927, pp. 216. (*Presentation.*)

McGehee (William Harper Owen): A Textbook of Operative Dentistry. 2nd edn. Churchill, 1937, pp. 922.

Maingot (Rodney), Editor, Post-Graduate Surgery, Vol. 2, Medical Publications, 1936, pp. 1747-3572.

Massie (Grant): Surgical Anatomy. 3rd edn. Churchill, 1937, pp. 468.

Miller (Samuel Charles): Oral Diagnosis and Treatment Planning. Churchill, 1937, pp. 620.

Mitchiner *et al.*: Surgery for Dental Students. Baillière, 1936, pp. 364. (Additional copy.)

Morton (J. Dudley): Human Anatomy, Double Dissection Method. 2 vols. Oxford U.P., 1934, pp. 265, 550. (*Presentation.*)

Nicholson (G. W.): The Mechanism of Tumour Formation; Studies in Tumour Formation. xi, xii, xii. Repr. *Guy's Hosp. Rep.*, 1933, Vol. 83, pp. 131-496. (*Presentation.*)

Osman (A. Arnold): Original Papers of Richard Bright on Renal Disease. Oxford U.P., 1937, pp. 172.

Paterson (Donald): Sick Children. 2nd edn. Cassell, 1937, pp. 600.

Ross (Joan): Post-mortem Appearances. 3rd edn. Oxford U.P., 1937, pp. 243.

Rowlands (R. P.) and Turner (Philip): The Operations of Surgery. Vol. 2—The Abdomen. 8th edn. Churchill, 1937, pp. 998.

Roxburgh (A. C.): Common Skin Diseases. 3rd edn. Lewis, 1936, pp. 377.

Savill (Thomas Dixon): A system of Clinical Medicine. Edited by Agnes Savill and E. C. Warner. 10th edn. Arnold, 1936, pp. 1114.

Sears (W. Gordon): *Vade Mecum* of Medical Treatment. Arnold, 1937, pp. 368. (*Presentation.*)

Sheehan (J. Eastman): Plastic Surgery of the Nose. 2nd edn. Hoeber, New York, 1936, pp. 186. (*Presentation.*)

Sheldon (Wilfrid): Diseases of Infancy and Childhood. Churchill, 1936, pp. 738.

Shields (Clive): Hay Fever, with special reference to Treatment by Intranasal Ionisation. Oxford U.P., 1937, pp. 57.

Skinner (Eugene W.): The Science of Dental Materials. Saunders. 1936, pp. 411.

Snow (John): On Cholera. Being a Reprint of Two Papers by John Snow, together with a Biographical Memoir by B. W. Richardson and an Introduction by Wade Hampton Frost. Oxford U.P., 1936, pp. 191.

Tchaperoff (Ivan C. C.): A Manual of Radiological Diagnosis. Heffer. Camb., 1937, pp. 256.

Walmsley (Thomas): A Manual of Practical Anatomy; A Guide to Dissection of the Human Body. 2nd edn., Vol. 2, Thorax and Abdomen; Vol. 3, Head and Neck. Longmans, 1934-36, pp. 233, 357.

Watson (Frederick): The Life of Sir Robert Jones. Hodder & Stoughton, 1934, pp. 327.

Webb (Gerald B.): Tuberculosis. Hoeber, New York, 1936, pp. 205. (*Presentation.*)

Wheeler and Jack's Handbook of Medicine. Revised by John Henderson. 9th edn. Livingstone, 1932, pp. 654. (Additional copy.)

Year Book of the Scientific and Learned Societies of Great Britain and Ireland, 1936.

Hospital Information, etc.

Notice

NINETIES CLUB (GUY'S HOSPITAL) UNION OF " GOBLINS " AND " CONTEMPORARIES "

The Annual Dinner of the above Club will take place at the Trocadero Restaurant, W.1, on Wednesday, May 5th, at 7.30 p.m., Dr. J. M. Brydone, O.B.E., in the Chair, preceded by a Meeting at 7 p.m. Price of Dinner, 12*s.* 6*d.*, exclusive of wine.

Anyone wishing to be present should, as soon as possible, notify Mr. E. B. Dowsett, 12, Gloucester Place, Portman Square, W.1.

Pass List

SOCIETY OF APOTHECARIES OF LONDON. PRE-MEDICAL AND PRIMARY EXAMINATIONS.

April, 1937.

Anatomy and Physiology.

K. W. N. Palmer.

Papers by Guy's Men

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Changes of Address

Dr. R. Moore Patterson, 45, Wimpole Street, W.1. *Welbeck* 5063.

Dr. Hector Cameron, Northridge, Hawkhurst, Kent.

W. G. C. Dickson, 7, Upper Harley Street, N.W.1. *Welbeck* 1867.

M. H. Maclaire Hillier, 44, High Road, Kilburn, N.W.6 (*Maida Vale* 7171), and 220, Walm Lane, Cricklewood, N.W.2 (*Gladstone* 6159).

R. B. Sutcliffe Westbourne, The Grange, Guernsey, C.I.

Dr. R. W. B. Ellis, 82, Wimpole Street, W.1. *Welbeck* 2405.

Births

THURSTON.—On April 8th, 1937, at 202, Bedford Hill, S.W.12, to Ione (née Barber), wife of Dr. Gavin Thurston, of Clapham Common—a son.

SUTCLIFFE.—On April 9th, 1937, at 27, Welbeck Street, to Eileen, wife of Dr. R. B. Sutcliffe, twins—a daughter and a son.

CUNINGHAM.—On April 10th, 1937, to Dr. and Mrs. Ronald Cuningham, of Londonderry—a son.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

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PASSIM

RECENTLY we have been favoured with a spell of sunshine for the end of the football season. Cricket has begun, and a definite nip in the air seems to tell us that summer cannot now be far distant. Altogether it seems vaguely possible to believe that Christmas was four months ago, and that it is now May. A month that is always full of inspirations from an editorial point of view, but this year there is but one topic of conversation, and we feel that it is hardly necessary to remind our readers that on Wednesday next the King and Queen of England will be crowned.

Certain architectural preparations, the police, the press, the Westminster Hospital, keepers of lodging-houses, anyone who may buy or sell, and, of course, the cigarette cards, have one and all conspired with kindness, and no doubt a certain profit, to keep this day constantly before our minds.

And now that it is here, though we have resisted the temptation to print this page in red and white and blue, we would with great respect add our modest congratulations to those of the multitude who will rejoice with their Majesties on this momentous day.

WE regret that in our last number we were unable to devote more space to replying to Professor Ryle's letter on the subject of the admission of some women medical students to Guy's. We had expressed our opinions on the subject in an earlier number—and we repeat that they were but our own—and Professor Ryle's arguments, weighty and serious as they were, have not caused us to change them. He brought certain charges against us, however, which call for some reply. The first of these is that we showed an ungenerous attitude towards women in our editorial comments. If this impression was gained by our readers generally, we regret it, for certainly we had no such intention, and we would assert that we have no wish in any way to hinder the progress of women in the medical world. The second charge—that of conservatism and Victorianism—is a difficult one to answer—if, indeed, it needs any answering. Opponents of any change are always thus labelled, and will continue to be while human nature endures. But Blimps are not always wrong; in fact, history has frequently proved them right. Two years ago we had similar criticisms levelled at us when we scorned the Peace Ballot and advocated rearmament instead of reliance on the League of Nations. The Blimps of 1935 have become the prophets of 1937. Opinions must be judged not on whether they appear progressive or reactionary at the moment, but on all the relative facts. However, we never attempted to make out a logical case against the admission of some women medical students to Guy's. We seriously doubt whether this could be convincingly done, any more than one could make out a case against the admission of girls to our public schools. All the arguments are apparently in favour of co-educational schools and universities, and we believe them to be excellent institutions. However, few, we think, would wish to co-educationalise Eton, Harrow and Winchester any more than they would Guy's, for while co-education offers some advantages, it also possesses many disadvantages, as Dr. Beddard points out in his letter to us.

The male mould of thought is not that of the female, as is evinced by the age-long practice common to both sexes of forming clubs and institutions where the other sex is not admitted. We believe this practice to be a good one, being productive of the best of each sex, and we consider that Guy's has gained in every way by its exclusively male character. Dr. Ryle argues that

six women would not alter this character, but we contend that where six are to-day, sixty may appear very shortly, in view of which, we shall continue to oppose with the utmost vigour the introduction of even one woman student, however comely, to our midst. With this we rest our case.

SINCE our earliest youth we have always wanted to drive an omnibus, and hoped, perhaps, that the prevailing strike might provide an opportunity for gratifying this craving, but so far, blacklegging seems to be out of the question, and trams and taxis have the roads to themselves; perhaps wisely, though how long it will be before a settlement is reached nobody seems to know, and, if the present chaotic congestion on the Underground continues, it seems likely that some auxiliary means of transport will have to be provided soon, for, with the Coronation at hand, no more inconvenient time could possibly have been chosen for such a disaster.

We have no quarrel with busmen and have often been grateful to them for consideration on the road, but if, as is asserted by their representatives, negotiations regarding their complaints have been going on for the best part of two years, then it seems that an extra week or two could not have made much difference to the position, and their decision to strike at this most critical time can only be interpreted as a regrettable attempt to force the public and their employers into buying them off with better terms—an attitude which we feel can hardly have earned either sympathy or respect for their cause.

However, it is hoped most sincerely that by the time this appears in print the whole question will have been settled satisfactorily, for strikes, once started, have an unfortunate habit of spreading. Indeed, it has even been rumoured that certain of the Residents were considering organising a "stay-in" (bed, of course) strike in favour of a twenty-three and a half hour day and coffee with their lunch, but so far no pickets have been posted in the Surgery.

To our profound regret, little seems to have been heard lately of one "Potato" Jones, whom, our readers will remember as the cause of considerable excitement and some forceful expressions of feeling during his attempts to enter certain Spanish ports. The descriptive name of "Potato" was, of course, merely to distinguish this picturesque mariner from "Corn Cob" Jones and "Ham and Eggs" Jones, also cruising in those waters, but we felt that, after a day or two in the popular headlines, "Potato" was an old friend, and we would very much like to know what has become of the cargo which he was so anxious to get rid of, and which, according to his interview with *The Times*, he already suspected had undergone a certain amount of decay.

Still, doubtless a suitable market has been found for his potatoes, and it has even been rumoured that the College Catering Company took the opportunity of acquiring the whole consignment at a remarkably low cost for the manufacture of cottage pie. This, of course, we cannot credit, but, as one of the largest consumers of what might be described as the "raw material" of the industry in question, we offer our heartfelt sympathy to whoever was unfortunate enough to eat these particular potatoes. Such moist and indurated tubercles are all too common in our midst.

THE brightness of the weather and the dazzling array of beauty seen passing through the Park on its way to Nuffield House has reminded us that Ascot, the best-dressed race meeting of the year (we do not mean the horses), is not now far distant, and we can imagine thousands of yards of flimsy feminine material being fashioned into exclusiveness for twenty times its value, lorgnettes being polished for the dowagers, and a host of top hats being borrowed for the menfolk.

However, preparations for Ascot are not over when the matter of dress has been decided. A car must be provided and, even when that is accomplished, the problem of where to park it arises, and we would draw the attention of all our readers to an announcement regarding this difficulty that appears on another page of this issue.

Last year Dr. Hurst was kind enough to allow people to park their cars in the grounds of his house for the very reasonable fee of five shillings each, and the money thus received was handed over to the Appeal, which was fortunate in benefiting by some fifty pounds. A most generous gesture, for which we were extremely grateful to Dr. Hurst, and we feel that all our readers will be delighted to know that he has very kindly offered to make the same arrangements for this year.

Therefore we would most strongly urge anyone who is thinking of taking a car to Ascot this year to make a point of using this car park and, as well as obtaining a most convenient and inexpensive solution to one of the major problems of any fashionable sporting event, help towards obtaining the money required for the Appeal.

To Dr. Hurst we would extend our sincere thanks for this very real generosity.

Tumours and Swellings of the Hand

A Clinical Lecture delivered at Guy's Hospital by N. Eckhoff, Esq., M.S., F.R.C.S.

GENTLEMEN,—The title of this lecture is stimulated by the writings of Mason in America[1,2] from which I have drawn freely and whose illustrations I shall use (in addition to my own) for this lecture.

I must first exclude swellings of the hand associated with acute infections, as this is a topic requiring a lecture in itself, which has been dealt with at different times by Mr. Ogilvie[3] and myself.[4] I will consider true tumours or neoplasms first.

MALIGNANT TUMOURS

Carcinoma or Epithelioma. This occurs in the hand in two chief forms :—

(1) *As the result of irritation.* The best example is the carcinoma that occurs on the hands of X-ray and radium workers. Amongst the pioneers in radiology there are many who have been afflicted with this disease, requiring amputation of one or more fingers, and specimens are to be found in most museums. In the pre-cancerous stage the skin is hard and dry, the nails brittle and cracked, while after a period of many years, malignant changes begin to appear in a fissure. Scars of burns, thermal and chemical, and hands that have been exposed to chemicals such as tar and creosote over a long period of time, are also prone to undergo malignant changes. The tumour may, however, start in untraumatised skin. It has the clinical features of a carcinomatous ulcer seen elsewhere in the body, *i.e.*, it is steadily enlarging, is irregular in shape, has rolled everted edges, and a filthy evil-smelling discharge (Fig. 1). Pain is

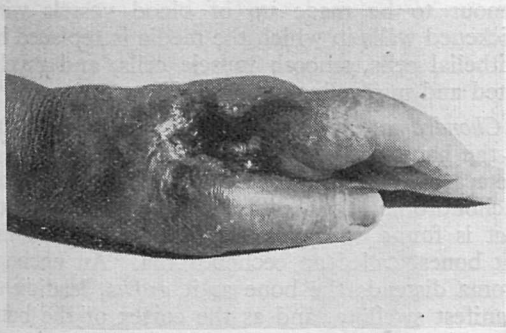

Fig. 1.—Carcinoma of hand.

marked, especially when the underlying bone is involved, and the axillary glands become enlarged.

(2) *Subungual Carcinoma.* This is found in elderly individuals. The condition looks for all the world like a chronic paronychia, with heaping up of irregular granulations around the base of the nail. The nail may or may not have been shed. The chief factor in making the diagnosis is the knowledge that such a condition exists, for in many cases treatment is delayed through ignorance. The granulations are naturally harder than those due to infection, and biopsy is diagnostic.

Melanoma. This also occurs around the nail bed in most instances. In about half the cases there is a history of trauma, while in others a mole appears under or near the nail, and this eventually begins to grow and may lift the nail off. A pigmented ulcer is then found, similar to that seen in carcinoma. In most cases the ulcer is not pigmented, although the axillary glands usually are (Fig. 2).

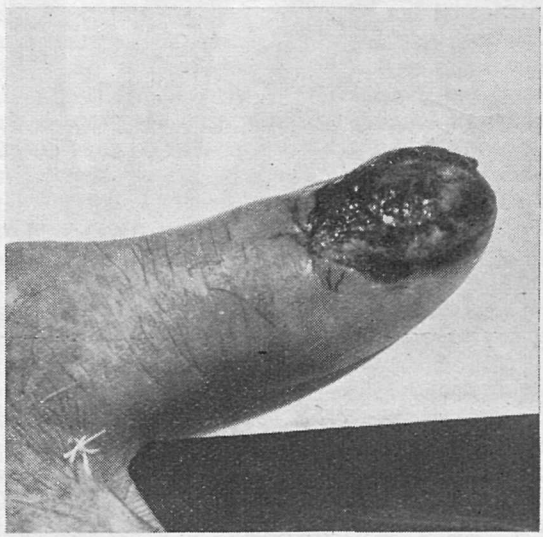

Fig. 2.—Subungual melanoma.

The treatment of melanoma and carcinoma may well be considered together. Radium is, in my opinion, disappointing in these tumours. The surgical ideal of removing the primary growth, the lymphatic vessels draining this, and the regional lymph glands is impossible of attainment.* It remains for us to remove the primary tumour, usually by amputation, to dissect out the axillary glands and to apply radium or deep X-rays over the lymphatic field.

* Since writing, Knaggs has reported two cases of melanoma alive respectively 28 and 30 years after operation on these lines.

Sarcoma. Sarcoma may occur in any part of the hand, arising in muscle, bone, or fibrous tissue, but it is not particularly common here. From the bad prognosis attending most sarcomata, the decision between ray therapy and amputation must be carefully made.

BENIGN TUMOURS

Fibromata are rare in the hand and need not detain us further.

Lipomata are not so uncommon. Superficial ones resemble lipomata elsewhere, and are usually easily recognised and equally easily dissected out. The deeper ones may be difficult to diagnose (Fig. 3). Owing to the dense fibrous tissue with

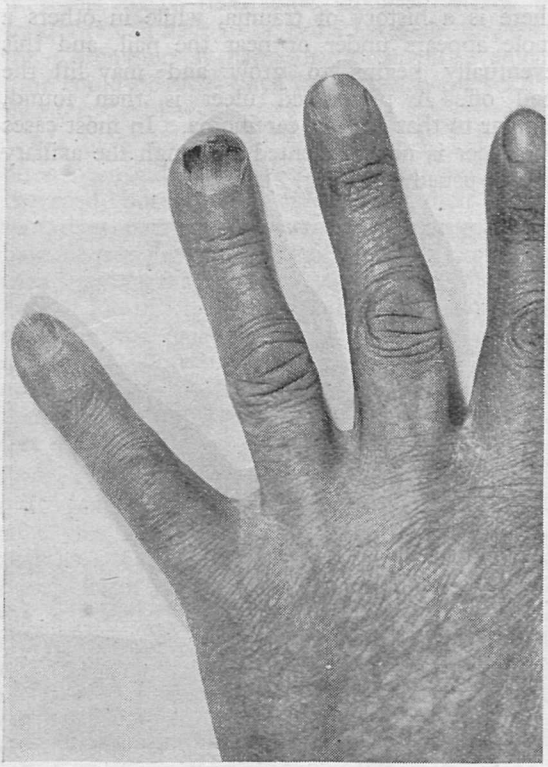

Fig. 3.—Lipoma elevating nail.

which they come into contact during their growth they may cause pressure symptoms such as tingling in the nerves, or they may be constricted into odd shapes. Some are described inside tendon sheaths, where they take on an arborescent form. They may be difficult to distinguish from xanthoma, fibroma, ganglia, or even from tuberculous tenosynovitis.

Xanthoma is a tumour peculiar to the extremities. Some look upon it as a granuloma, some as a connective tissue tumour, and some as a tumour arising in the sesamoids or other bones at the wrist. It arises in close association with the tendon sheaths and appears as firm slowly growing nodular masses, most often on the volar surface of the hands and fingers, sometimes extending to such a degree as to resemble a tuberculous tenosynovitis. Bone may be eroded. The tumour is made up of nodules of yellow, orange, brown and grey tissue, with fibrous septa, and a thin capsule. Microscopically it contains the following types of cells: (1) giant cells, (2) spindle cells; (3) large round cells, and (4) foamy cells, the latter containing one or two nuclei and pale vesicular cytoplasm, which bears lipoid globules stained with xanthophyll and carotin.

The tumour should be dissected out entire, which may be difficult and tedious, for recurrence follows if any tissue is left.

Glomus Tumour. This is another tumour with peculiar features, and has only recently been described. It usually occurs in the nail bed, though it may occur in other parts of the hand or in the rest of the body. Masson[5] has described what he calls a "neuromyoarterial glomus," which is an arterio-venous anastomosis, richly supplied with nerve fibres, scattered in the skin, especially at the extremities. He thinks it has something to do with heat regulation. A glomus tumour is an enlargement of this structure.

With or without history of trauma, the patient complains of pain, at first in the tip of the finger, later radiating up the arm, whenever the finger is touched. A bluish nodule appears under the nail somewhat resembling an angioma, in that it gets paler on pressure, resuming its blue colour when the pressure is released. There may be some erosion of the underlying bone. The only permanent cure is dissection of the tumour after the nail has been removed. Section shows the tumour to be made up of blood vessels with thickened walls in which the media is replaced by epithelial cells, smooth muscle cells, and myelinated and unmyelinated nerve fibres.

Chondroma. This tumour is commonly found in the hand and fingers, arising in the shaft of a metacarpal or phalanx, and is therefore called an enchondroma, thus differing from the tumour that is found springing from the surface of the flat bones, called an ecchondroma. An enchondroma distends the bone as it grows, leading to manifest swelling, and as the cortex of the bone is gradually eroded, pathological fracture is not uncommon. In a certain proportion of cases many bones are involved, sometimes leading to gross deformity of the hand, giving a superficial resemblance to those hands diffusely infiltrated with gouty deposits.

After X-raying the hand to determine the absence of tumours in the other bones of the hand, a chondroma should be curetted out. New bone will grow to fill the gap thus created.

Osteoma. While subungual exostoses are common on the big toe, they are very uncommon on the hand, and I have only seen one example, of which I show you a slide (Fig. 4). These tumours

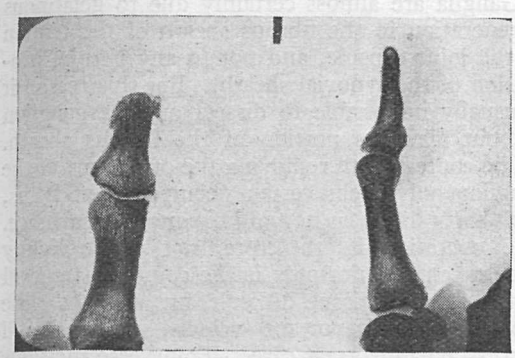

Fig. 4.—Subungual exostosis.

fall under the head of cancellous osteomata, the cancellous tissue of the tumour being continuous with the cancellous tissue of the parent bone. When placed under the nail, they lift it up as they grow.

A subungual osteoma can be removed easily once the nail has been taken off, as long as especial care is exercised in avoiding damage to the nail bed.

Other osteomata are uncommon, except where a bony outgrowth represents an attempt at the formation of a supernumerary digit (Fig. 5).

Fig. 5.—Supernumerary outgrowth.

This can usually be removed by a suitable plastic operation. Bony outgrowths also occur in the neighbourhood of joints afflicted with osteo-arthritis, but these are properly called osteophytes, and are not osteomata (Fig. 6).

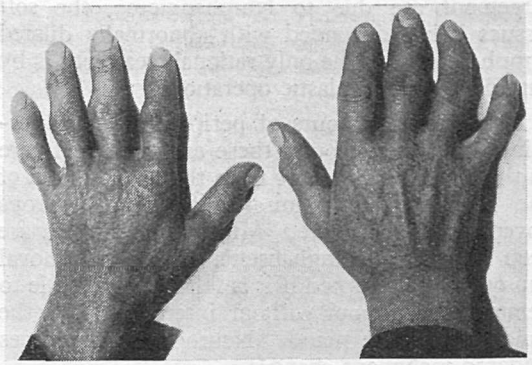

Fig. 6.—Osteophytic outgrowths.

Angioma. Angiomata occur in the hand, as elsewhere in the body, in three varieties : (1) capillary, (2) cavernous, (3) plexiform (or cirsoid aneurysm). Capillary angiomata are made up of dilated capillaries, and are bright red in colour, and usually not raised above the skin surface. They can be destroyed by electrolysis or carbon dioxide snow if small, or by excision and skin-grafting if large. Cavernous angiomata are made up of larger vessels of venous nature, and usually stand up from the surface. When pressed upon they can be flattened, but swell up again, and resume their blue colour as the blood returns slowly. These can be made to shrink with radium, the fibrosed residuum being excised, with suitable skin-grafting to repair the defect. The excision of angiomata may tax the surgeon's skill to the utmost.

A plexiform angioma is one in which large vessels take part in the formation of the tumour, with free communication between arterial and venous elements, so that pulsation is marked. The tumour is frequently deeply situated, and may pass from the volar to the dorsal surface between the metacarpal bones. Surgical removal may require the greatest patience and skill, while other methods of destroying the tumour, including radium, electrolysis and the injection of thrombosing solutions, or even boiling water, have been tried without marked success.

Mention should be made of occasional arterio-venous aneurysms produced by trauma, when a punctured wound inflicts simultaneous damage to the walls of an artery and a vein, a communication being later established between them.

Lymphangioma. Unusual enlargement of one digit is sometimes seen. It may be due to

abnormal development of all the elements of the digit, including the bones. I have seen progressive enlargement associated with a cavernous angioma. But most instances of abnormal enlargement are due to lymphangioma, the soft tissues being distended with abnormally dilated lymph vessels. The only rational treatment is by carefully planned plastic operations.

Neuroma. Tumours of peripheral nerves certainly do occur, though these are somewhat rare in the hand. They arise from the proliferation of the sheath of Schwann, or from the fibrous coverings of the nerve. Multiple neuromata are seen in von Recklinghausen's disease. Removal can only be attempted if it is felt to be possible to remove the tumour without interfering with the function of the hand. Neuromata sometimes undergo malignant changes.

Giant-celled Tumour. 1. Of bone. This is rare in the hand, but is sometimes seen in a metacarpal bone, and may then be confused with a chondroma before it is exposed. It will then be seen to be made up of soft vascular maroon-coloured tissue, and section will reveal its true nature. Surgical excision should be rewarded with recovery, though recurrence will occur if it is incomplete. The effect of radiation is somewhat uncertain.

2. Of tendon sheath. A tumour is occasionally found occupying the greater part of a finger, which, on dissection, proves to be arising from the tendon sheath, and on microscopical examination is seen to be made up largely of giant cells. It has been described under " Xanthoma."

OTHER SWELLINGS

Dermoid Cysts. Dermoid cysts seen in the hand are usually due to implantation. The rarity of these in children makes congenital inclusion unlikely as the cause. They are usually found upon the volar aspect, and there is not infrequently a history of a wound or puncture. A few epithelial cells are carried down by this injury into the subcutaneous tissue, where they continue to grow and proliferate, the central cells undergoing degeneration to produce the cyst. They are rapidly cured by removal.

Ganglia. Ganglia are common on the dorsum of the wrist, but occur also on the volar aspect of the wrist, and not infrequently in the fingers on the volar aspect, in relation to the first flexion crease. In this situation they are smaller than a pea, and very hard, so that they are not uncommonly diagnosed as sesamoids, while the patient is usually convinced of their bony origin. They cause much pain when articles are carried in the hand. Ganglia in the wrist region present as globular tumours, tending to run longitudinally in the lie of the tendons. They are smooth and elastic or cystic in consistency, being made more tense by the contraction of the tendons, or by being put on the stretch. They are painless, and give rise only to aching sensations when the hands are used a great deal.

Ganglia are almost certainly due to gelatinous degeneration in the fibrous sheath of the tendon or the joint capsule, and not to any hernial protrusion of the synovial sheath. For this reason it is usually impossible to dissect out the ganglion without taking a portion of the fibrous sheath. To be content with removing the outer part of the ganglion only spells certain recurrence, and this, I am sorry to say, is not an infrequent occurrence. The operation is, therefore, not to be lightly undertaken, for not only is the complete removal of the diseased tissue difficult, but also the close proximity of important vessels, tendons and nerves demands great care. Transverse incisions leave much less scar than longitudinal ones, and one has only to see the wide and sometimes adherent scars on some wrists to wonder if the cure is not worse than the disease. Expression of the ganglion, possible aided by acupuncture, is not unjustifiable in the first instance, and I have the impression that only a few, amongst many that I have expressed, have returned a second time for further treatment. I regard the injection of sclerosing solutions as misguided and dangerous. From the nature of the condition it is difficult to see how these solutions can benefit, for their success surely depends upon an endothelial reaction. In a somewhat similar condition, *i.e.*, semimembranosus bursitis, I have seen a severe infection follow the injection of sodium morrhuate.

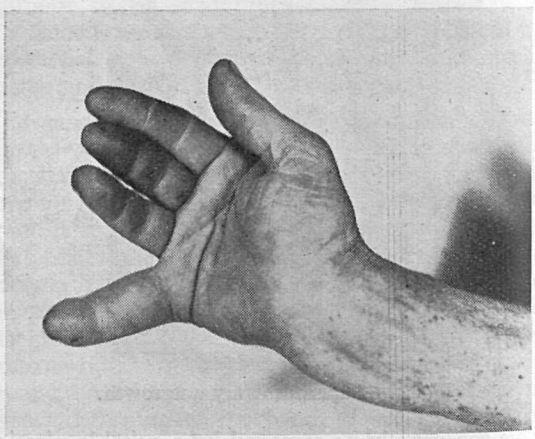

Fig. 7.—Tuberculous tenosynovitis.

Tuberculous Tenosynovitis (Fig. 7). This condition may affect one of the short digital tendon sheaths, or the radial and ulnar bursa (usually together), or the dorsal tendon sheaths at the wrist. The right hand and the volar sheaths are more commonly affected. Tuberculous lesions may exist elsewhere. Direct relationship to trauma is unproven.

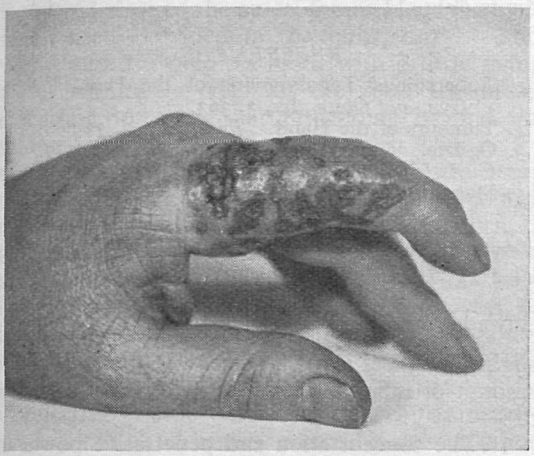

Fig. 8.—Tuberculous ulceration.

At first only slight thickening of the sheath is found, with some increase of synovial fluid. Later gross thickening occurs, with granulation tissue reaction and rice body formation. Finally the tendon itself is attacked, and rupture may take place. Both visceral and parietal layers of the synovial sheath are involved. The clinical picture is that of a slowly developing spindle-shaped swelling in the line of the tendon sheath, with pain, and burning and tingling sensations in the peripheral nerve distribution. Later a sense of fluctuation may develop, and when the common flexor sheath is the site of the disease, it is possible to fluctuate from above the wrist to the palm. The swelling in these cases is hour-glass shaped, being constricted by the strong transverse carpal ligament. The presence of rice bodies gives rise to crepitation, while destruction of tendon is indicated by loss of function. In untreated cases sinus formation and secondary infection may occur.

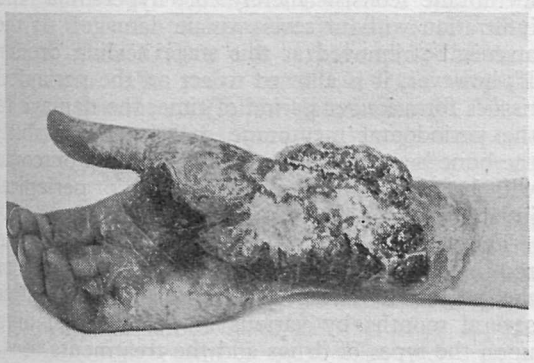

Fig. 9.—Electric burn granulations.

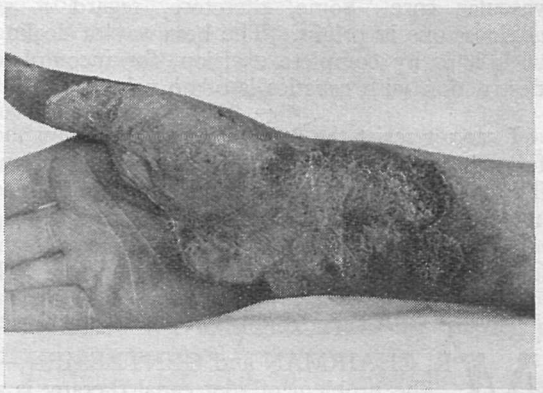

Fig. 10.—Nine days after skin-grafting.

Very prolonged splinting will probably bring about a cure, but at the risk of producing intractable stiffness, and at the cost of much loss of time. Surgical excision of every particle of sheath affected is much more satisfactory, even if the operation is a tedious one. Recurrence may occur if the excision is incomplete. The presence of gross tuberculous lesions elsewhere would naturally preclude this form of treatment.

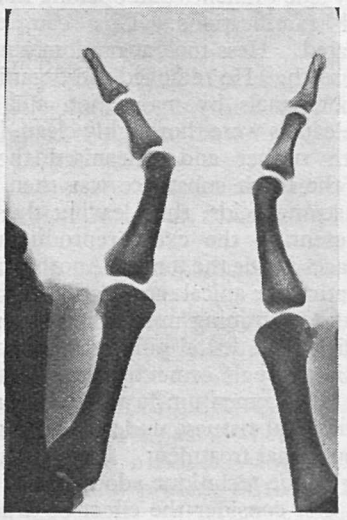

Fig. 11.—Extra phalanx to thumb.

Telangiectatic Granuloma. This is a vascular easily bleeding tumour that occurs on the hand, usually on the flexor aspect of a finger, and is probably due to infection in a skin wound, although history of injury is not always obtained. The story is more often that of a black spot having developed on the finger, the skin later breaking on its surface. The tumour is mushroom-shaped, the skin rising like a collar around its pedicle, supporting a vascular core. Some, therefore, regard it as angiomatous in origin. The best way of dealing with it is by complete excision, for incomplete destruction with caustics is of no value.

I cannot resist the temptation to show you the following interesting pictures from my collection. The first is that of a tuberculous ulceration of the left index finger, which is definitely uncommon in this form (Fig. 8). The second case is one of hypertrophic granulations following an electric burn, in which you see the result nine days after curettage of the area and Thiersch grafting (Figs. 9 and 10). The third case is that of a man who has three phalanges to his thumbs, a condition of great rarity which is also present in his mother, while a brother and sister have supernumerary digits (Fig. 11).

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Root Canal Therapy

A Paper read before the Dental Society, Guy's Hospital, by W. H. West, Esq.

MR. CHAIRMAN and GENTLEMEN,—The problem of root canal therapy is a much-debated one, and one upon which there is a great divergence of opinion. The techniques are many and varied, as are the difficulties which confront the dental surgeon.

For successful root-canal therapy it is necessary to have some knowledge of the anatomy of the root canals and the surrounding tissues, and understand their reactions to certain stimuli.

The root canal may vary from the simplest form, with the apical foramen simply a continuation of a wide straight canal opening at the most apical portion of the root, to a very complex root canal with many side branches and opening in a number of apical ramifications. This can easily be demonstrated. Hess took at random a number of extracted teeth. He removed the organic content of the root canals by maceration and mincing. When the canals were thoroughly clean, he packed them with rubber and vulcanised them. The whole of the tooth substance was then dissolved away by strong acids, thus leaving the vulcanite cast representing the exact reproduction of all hollow spaces inside the tooth. Another method of demonstrating the apical ramifications is by cutting sections and examining under the microscope.

The exit of the dental pulp at the apical end of the root is through cementum and not through dentine. The cementum in this position, as well as the periapical tissues, undergo certain changes during root canal treatment. These changes vary according to the technique adopted.

Let us first consider the effect of drugs on the periapical tissues. Kronfeld has found that practically every drug in a root canal causes at least a slight periapical involvement. He found that the amount of inflammation was in direct proportion to :—

1. The concentration and penetrative power of the drug.
2. The amount of drug that is used.
3. The time that the drug is allowed to act on the tissues.
4. The width of the apical foramen.

In a young person the action of the drug will be much greater than in an old individual with very narrow or almost obliterated root canals. Again, a penetrating drug will cause much greater tissue destruction than a drug with coagulating and therefore rather self-limiting properties.

It has been found experimentally in animals that a slight amount of periapical irritation and inflammation always accompanies the use of arsenic trioxide. In the first twenty-four to forty-eight hours the changes in the periodontal membrane consist merely of hyperæmia and infiltration without severe tissue damage. If the arsenic be removed at this stage healing occurs. If, however, it is allowed to act on the periapical tissues for a longer period of time, the damage to the periodontal membrane will be irreparable; the bone becomes involved and the final outcome will be the formation of a chronic periapical inflammation.

Feldman has shown that all drugs sealed in the root canal at first caused a reactive infiltration of the periapical tissues, which was followed after several months by various reactions, depending upon the types of drugs and the treatments used. Roots filled with guttapercha or oxyphosphate cement after using a mild drug were found to be

surrounded by normal periodontal tissue. Where powerful and penetrating drugs had been used, there was no evidence of a healing process, but a progressive inflammation and destruction of both hard and soft periapical tissues.

Coolidge has found that in a canal containing vital pulp tissue free from infection, conditions are most favourable for the forces of repair if the pulp is severed close to the apical foramen and the root-filling then extended to the pulp stump. This would afford a pulpless tooth with a little living tissue within the apex of the root, the filling extending to it but not protruding beyond the foramen. This affords the greatest chance for new cementum formation at the apex and along the walls of the canal. This is probably due to a more mild inflammatory reaction than when a foreign body irritant has to be encapsuled. If an apical foramen is large, the removal of the pulp leaves a wounded surface. In the process of healing, resorption usually precedes repair, until an equilibrium is established. Repair begins with the replacement of osteoclasts by osteoblasts. Connective tissue cells replace inflammatory exudate cells, and healing occurs by the formation of scar tissue. New bone is laid down and new cementum is deposited on the root, until the normal relation of periodontal tissue is re-established.

Coolidge reports on a molar tooth which was extracted (owing to a fracture of the jaw) six months after the root canals were filled with guttapercha. At the apex of one root a fibrous tissue capsule was forming across the exposed end of the root canal filling that slightly protruded from the foramen. In the same way, Coolidge has demonstrated the complete encapsulation in fibrous tissue of a piece of chlorpercha. Another photomicrograph by the same author admirably illustrates the principle of severing the pulp close to the apical foramen and filling to the pulp stump. This tooth was extracted nineteen years after the pulp was removed. Layer after layer of cementum had been laid down within the walls of the apical foramen until a mere thread of pulp tissue of a very atrophic character remained. The same author has also demonstrated tissue healing following apicectomy. There is deposition of cementum and regeneration of a normal periodontal membrane on the resected surface.

before beginning root-canal therapy, there are always the questions: "Is this a suitable tooth to treat? Is the patient a suitable subject for root-canal treatment?" These questions are often very difficult to answer satisfactorily. Lieban stresses certain points as indications and contra-indications for root-canal therapy.

With the former :—

1. Only when asepsis can be maintained throughout the entire operation.

2. In the majority of pulp exposures in adults and in all teeth with fully developed roots, particularly where the exposure is caused by the removal of carious dentine. In the latter instance it is better to remove the pulp rather than run the risk of pulp capping, with a resultant necrotic pulp and possible periapical changes.

3. Where infections in pulp canals and periapical areas can be eliminated by treatment or surgical means, provided the physical condition of the patient permits.

Lieban's contraindications for root-canal therapy are :—

1. Where the condition of the patient shows plainly a manifestation toward focal infection, disease, or other serious ailment.

2. In pyorrhetic teeth with a large amount of alveolar resorption.

3. Where the apices of roots are markedly denuded or necrosed.

4. Multirooted teeth with interradicular abcesses.

5. Periapically infected teeth where the apices penetrate the maxillary sinus or border very closely on the the floor of the antrum.

6. Perforation of root which cannot be correctly sealed, excepting root perforations near the apex that can be corrected by excision of the root end.

7. Teeth from which broken instruments cannot be removed, thus preventing correct pulp canal filling.

8. In cases where roots have been shelved to the extent that it is impossible correctly to fill the root canals.

9. Teeth with extremely tortuous root canals.

10. Inaccessible canals.

Best has classified teeth according to the extent of the pathological changes, which have taken place. He has divided them into cases in which :—

1. The pulp is vital.

2. Only a portion of the pulp tissue is destroyed.

3. The pulp is diseased, but with no periapical involvement.

4. The pulp is diseased and there is periapical involvement.

Let us first consider a few of the methods of root-canal therapy with a vital pulp and then apply these with certain modifications to the other cases.

After having satisfied ourselves with regard to the advisability of root-canal therapy, there are certain prophylatic measures which should be adopted, in order to prevent further infection in the field of operation. All adjacent infected teeth which are condemned to extraction should be removed. The mouth should be sprayed or

rinsed vigorously with an antiseptic solution. The rubber dam is applied and all adjacent teeth that are exposed, together with the adjacent surface of rubber dam, should be painted with an antiseptic. Root-canal therapy should not be performed on any tooth where it is impossible to apply a rubber dam or where the saliva cannot be controlled.

Buchbinder has found that the greatest percentage of successes have been obtained with the use of local anæsthetics for the removal of the pulp, pressure anæsthesia taking second place, and arsenic third.

All instruments that are subsequently used must be sterile. It is not much use going to great pains to remove bacteria from a root canal if another lot are to be introduced on dirty instruments. Burrs can be kept sterile in spirit to which has been added a small quantity of sodium bicarbonate to prevent rusting.

At this stage all caries should be removed. This reduces the liability of further infecting the pulp. Any interstitial cavities are filled with oxychloride cement. This generally makes it much easier to apply a rubber dam at the patient's next visit and facilitates the application and removal of dressings. In a very badly broken down tooth it may even be necessary first to surround the tooth with a cemented band.

The pulp chamber should be opened up with small burrs so as not to exert a greater pressure than is necessary upon the pulp. This reduces to a minimum the possibility of driving bacteria to the apex. This opening should be made in such a position as to give free access and in a straight line with the general contour of the root canal. The exposure can now be enlarged with a small size fissure burr.

The standard technique at Columbia University includes the supply of graded sizes of files, broaches, pathfinders and reamers in an agate tray. These are wrapped in a towel and autoclaved. The open towel is placed on the bracket table and used as a sterile base.

Before passing a barbed broach up the root canal it is as well to do a little careful exploring with a smooth broach and compare the findings with the radiograph. The barbed broach can then be passed up the root canal in close apposition with the side wall, until the apex is located. It is then given a turn and withdrawn. This generally removes the bulk of the pulp. Any loose fragments can now be removed by passing the broach up and down the canal wall. According to Blayney, after pulp removal the smallest possible quantity of eugenol is placed on a paper point that will not impinge upon the remaining vital tissue and the tooth sealed for four or five days. This is to permit granulation tissue to form over the remaining stump. The use of irritating drugs will materially delay the process of healing and often cause œdematous fluid to collect in the root canal. Prinz and Wass apply a saturated solution of potassium alum in glycerine. This prevents hæmorrhage into the apical portion of the canal, with the resultant formation of a clot which on the next visit would have to be removed. The alum solution is styptic and antiseptic, and further prevents decomposition of hæmoglobin.

This completes the first part of the operation. At the second visit, a rubber dam is applied and the usual preliminaries performed. The dressing is removed and a measurement wire placed in position. Some authorities insist upon the rubber dam being kept in position while the tooth is X-rayed. All instrumentation can now be controlled with the measurement wire. Reamering may now be commenced with the smallest Kerr's reamers, working up to the larger ones until the desired size is obtained. No intermediate reamers should be omitted, as otherwise a step is obtained in the root canal which is extremely difficult to remove. No force is exerted during the process of reamering, as this puts an unnecessary strain on the supporting tissues. The final result should be a finely tapered, smooth root canal.

Blayney, Buchbinder and others now advocate the application of a eugenol dressing, applied in the same manner as the one immediately following the removal of the pulp. Upon the next visit of the patient, the canal is ready for filling.

The question of root-filling materials offers a great field for discussion and much difference of opinion.

The recognised requirements of a root-canal filling material are :—

1. It should be easily introduced into the canal.
2. It should seal the canal laterally as well as apically.
3. It should not shrink after being inserted.
4. It should be impervious to moisture.
5. It should be bacteriostatic or at least not encourage bacterial growth.
6. It should not irritate periapical tissues.
7. It should be radioapaque.
8. It should not stain tooth structure.
9. It should be easily and quickly sterilised before insertion.
10. It should be easily removed from the root canal if necessary.

We have already seen the effect of guttapercha on the periapical tissues. The photographs show a high degree of tissue tolerance and appear very satisfactory in every way. The method of application is to cut a small guttapercha cone to fit

snugly the apex without impinging upon the pulp stump. It is then reduced in length to about three or four millimetres. Chlorpercha is placed in the root canal and then replaced by the guttapercha point. This is gently pushed into position, taking care not to exert too great a pressure. Small pieces of guttapercha are then packed tightly into the canal until the desired amount is in position.

The desirability of incorporating strong antiseptics in a root canal filling, apart from the liability to tissue damage, is dubious on account of the fact that they sooner or later lose their antiseptic action.

In the last decade attention has been focussed upon metallic root canal fillings. In 1929 Grove introduced gold cones and Trebitsch advocated silver points. In 1933 Oppenheim brought out a slightly different scheme. He used a point made of two dissimilar metals. He claimed an antibacterial action due to the difference in potential of the two metals, which were arranged in layers. In 1936 Strean reported on the oligodynamic action of silver and suggested its use as a root filling. Trebitsch, Greth, Eckstein and Tuerkheim, who were among the first to use silver points, claimed a bactericidal action due to its oligodynamic action. The word " oligodynamic " (*oligos*, small; *dynamus*, power) was coined by the Swiss botanist Naegeli, to describe the toxic action of minute amounts of a metal in an aqueous solution. He found that one part of copper in almost eighty million of water was sufficient to kill spiregyra in about one minute. Other metals such as silver, zinc, mercury, lead, manganese, etc., also exert a similar destructive action on certain plant and animal life. In 1899 Thiele and Wolf found no bacterial inhibition from gold or tin, but silver and mercury showed definite bacteriostasis. Schenk also found no antibacterial effect from gold or tin against *B. prodigiosus*, but silver produced a zone of inhibition about 1.5 cm. in diameter. According to Leist, copper showed the greatest degree of bacterial inhibition, while silver showed the next greatest degree of inhibition of those metals which he tested. Staub, on the other hand, found mercury, silver and copper, in the order mentioned, to be the most effective.

That silver has a high oligodynamic action is beyond doubt. That this has been known empirically for some time is indicated by the fact that over fifty years ago wounds were covered with silver foil and bandages dusted with powdered silver. According to Grossman, silver, when used with a suitable root canal cement, complies with all the requirements of a root canal filling. The cement used by Grossman consists of :—

Powder—	Precipitated silver (300 mesh)	2 parts.
	Powdered rosin (300 mesh)	3 parts.
	ZnO	4 parts.
Liquid—	Eugenol	9 parts.
	4 per cent. $ZnCl_2$	1 part.

It is open to doubt if it is the silver point which has the desired action or the silver in the cement. Buchbinder's technique is very similar, except that he uses guttapercha points. His cement is slightly different, the formula being :—

Powder—	Metallic silver (precipitate)	4 parts.
	Rosin (powder)	6 parts.
	ZnO	1 part.
Liquid—	Eugenol	5 drops.
	Hexylresorcinal	1 drop.

The liquids are kept in separate dark bottles. There is evidence to show that if a little cement is pushed through the apex there is a tendency to absorption in the course of one or more years, resulting in some cases with complete absorption, with coincidal laying down of new bone. As a precaution against staining of the tooth with silver, the inside of the pulp chamber and the canal entrance are coated with a layer or two of cavity varnish.

As has already been mentioned, copper has a great inhibitory action on certain bacterial growth. Miller has found that copper amalgam, both freshly prepared and old fillings, had antiseptic properties, and dentine from extracted teeth that had been filled with copper amalgam was sterile, and, what is more surprising, it had antiseptic properties also. Simms, Black and Kirk have found that copper amalgam retained its antiseptic properties after being transferred to a fresh medium every two weeks for a period of five years. It has been found that teeth that have remained tender for months under bland medical treatment lost their tenderness in from a few hours to a few days after the insertion of a copper amalgam root filling. Copper amalgam is one of the most easy root fillings to insert. It should be mixed quite smoothly by adding or expressing mercury as required. The mix must not be sloppy. A small piece is carried to the mouth of the canal and gently guided into the canal with a suitable plugger, any suggestion of packing being avoided. The plugger is held with a delicate grasp and is passed through the amalgam and, with one continued motion, right up to the end of the canal. This is continued until the amalgam is built up about 1 mm. at the apical end of the canal. Gentle tamping will then condense it. This process is repeated until the desired amount, from 3 to 5 mm., has been inserted. To prevent discolouration of the crown or visible neck, the root filling is removed to a safe depth—from 4 to 5 mm. rootwise of the gum margin.

After having considered some of the forms of treatment of the tooth with the vital pulp, let us consider the treatment adopted for the other cases. Referring again to Best's classification we have :—

2. Only a portion of the pulp tissue is destroyed.
3. The pulp is dead, but with no periapical involvement.
4. The pulp is dead and there is periapical involvement.

Best considers that the second group is an extremely favourable one to treat, and suggests, in addition to the principles outlined in the first case, the sealing in of a mild antiseptic for a short period. He also recommends irrigation with a surgical solution of chlorinated soda. Chlorine in its free or nascent state attacks the protein molecule of the bacteria by replacing its hydrogen atom or atoms. It also has the property of neutralising and condensing some of the gases of putrefaction, most noticeably ammonia. The major portion of the chlorine liberated acts on water because of its affinity for hydrogen. The water molecule is broken up, liberating free oxygen, which in turn oxydises the products of bacteria and bacterial decomposition.

Where the pulp is dead, extreme care must be taken. Necrotic tissue in a root canal affords an excellent medium under ideal conditions, *e.g.*, body temperature, for the growth of organisms. These organisms may obtain access either direct from the mouth or via the blood-stream. The immediate result is dependent upon the pathogenicity, which is often raised by the more favourable conditions of growth. Hence it is not surprising that organisms which are relatively innocuous under conditions prevailing in the mouth become pathogenic when transferred to the dead pulp.

The fundamental problem, therefore, is the entire removal of the dead tissue or the equivalent rendering it incapable of supporting such growth and maintaining it in that condition. A tooth of this description may be looked upon as a syringe full of bacteria and their toxins, ready at any moment to discharge its contents into the periapical tissues. The removal of such a pulp may be by :—

1. Mechanical means.
2. Chemical dissolution.

For the latter, Wilkinson suggests deliberate infection with a non-pathogenic organism with marked proteolytic action. Proteolytic organisms are often found in the mouth and sometimes do disintegrate the pulp completely. Wilkinson believes that such a reaction accounts for those cases where, on opening up a tooth which has died, the pulp chamber and canals are found to be empty and dry. In 1916 Donaldson suggested that an organism with marked autolytic properties which was also non-pathogenic should be introduced into gunshot wounds to assist Nature to get rid of the necrotic tissue. He isolated an organism he named the Reading bacillus which has the following properties : (1) of disintegrating dead tissue and, while doing so, not giving rise to fresh toxic substances ; (2) of hydrolysing the toxic degradation products of other organisms and rendering them innocuous ; (3) of not attacking living tissue and of being non-pathogenic to man. Its proteolytic action is due to the elaboration of an enzyme which can be filtered and resembles trypsin. A valuable property of it is that it will hydrolyse the toxins produced by other organisms such as tetanus, diphtheria, etc., and so renders them innocuous. Preliminary investigations were carried out to determine how long it would take for the Reading bacillus to autolyse the pulp tissue. Several teeth of recent extraction and approximate size had openings made in their pulp chambers. They were then placed in tubes of broth previously inoculated with the Reading bacillus. The teeth were removed at varying periods and split in order to observe the stage of digestion of the pulp tissue. The pulp tissue was found to be completely digested in seven dyas. By inoculating with a three-day-old culture and incubating anaerobically as under the conditions approximating those that would pertain in the mouth, the majority of the pulp was digested by the end of the first week, but autolysis was not complete until the end of fourteen days.

The chief objection to the Reading bacillus in the mouth is the foul smell produced by the organism. For this reason other proteolytic enzymes of non-bacterial origin were investigated. Papain is an enzyme present in leaves, fruit and seeds of carica papaya or papan. The extract of the fruit containing the enzyme is sold as a brownish powder, relatively cheap, readily obtainable, and it keeps well. Certain antiseptics can be added to ensure sterility, *e.g.*, thymol, 0.1 per cent.; phenol, 0.5 per cent. ; formalin, 0.1 per cent. In tests made, the above antiseptics in the strengths indicated, did not destroy the enzyme and cultures made after twenty-four hours were sterile.

What few cases Wilkinson reports on seem very satisfactory. The work in this direction is of very recent origin, so perhaps before long we shall hear even more favourable reports.

For treatment of the dead pulp, Best relies upon powerful antiseptic dressings and chances their effect on the periapical tissues. The usual criterion for surface sterility is that the dressing, when removed from the root canal, should not have a putrefactive odour, but should have the same smell as the medicament applied. It is only

possible to obtain surface sterility in a root canal owing to the numerous aberrations that are usually present, and the fact that the bacteria are small enough to march four deep along the dentinal tubules. It has been estimated that the total length of the dentinal tubules of an upper canine tooth is approximately three miles. With regard to the problem of the bacteria in these tubules, Howe's silver nitrate method is particularly applicable. The solution is prepared by adding strong ammonia to a saturated solution of silver nitrate until the resulting precipitate of silver oxide is dissolved in excess of ammonia. On addition of formalin, metallic silver is precipitated in a finely divided state, the formic acid acting as a reducing agent. This acid is highly irritating, and great care should be taken to add more silver nitrate and again reduce with eugenol. If by this method the mouths of the dentinal tubules leading into the root canal are rendered sterile and occluded something of real value has been achieved. Hopewell-Smith states: "It is impossible for infection to occur through the normal cementum. . . . its chief function is the attachment of the fibres of the periosteum. Its very homogeneity renders it absolutely impervious to the encroachment of micro-organisms."

Formocresol contains tricresol, which is a disinfectant and analgesic, and formaldehyde, which is also a disinfectant as well as decolouriser. It unites with products of pulp decomposition, forming inert substances.

A drug which has the power of dissolving albumen may cause much greater tissue destruction than a much more powerful drug which is a coagulant and hence more self-limiting in its action.

The efficiency of electrolytic medication has been attested by Rein, Johnstone, Crane, Sturridge, Grossman, Prinz and many others. The principle most in vogue is by ionising a normal sodium chloride solution with a zinc anode in the canal and a moistened sponge acting as a cheek cathode. The bactericidal and curative action on the soft tissues of various ions such as zinc, iodine, chlorine, silver and copper has been definitely proved. With a zinc anode, the secondary reactions which occur result in the formation of nascent zinc chloride at that pole, and this is responsible for the caustic action. Dr. Sidney Russ has shown that there is a migration in the tissues of bacteria to the positive pole—a positive chemiotaxis. On reaching the pole they are rapidly destroyed.

Many authorities advocate radiographic examination at regular intervals, the tooth being X-rayed before treatment is begun; with the measurement wire in position; after insertion of the root-canal filling, and then at regular three-monthly or six-monthly intervals for as long as the patient wishes to co-operate.

Buchbinder gives statistics which compare favourably with the findings of other workers :—

Teeth Without Apical Disturbance

Total number of cases	65
Number of successes	57
Number of failures	8
Per cent. successes	88
Per cent. failures	12
Average time of follow-up	16 months.

Success is defined as no discernible deviation from the normal in repeated radiographic examination.

Teeth with Vital Pulps Treated with Pressure and with Injection Anæsthesia

With Pressure—	
Total number of cases	11
Number of successes	8
Number of failures	3
Per cent. of successes	72
Per cent. of failures	18
With Injection—	
Total number of cases	24
Number of successes	22
Number of failures	2
Per cent. of successes	92
Per cent. of failures	8

Teeth with Periapical Disturbance

Total number of cases	97
Number with complete bone regeneration	44-45%
Number with considerable regeneration	33-34%
Number unchanged or little regeneration	20-21%

A review of root-canal therapy shows a few dominant characteristics.

Strict asepsis should be observed. A technique should be adopted which will encourage deposition of cementum with physiological closure of the apical foramen. Root-canal therapy on anatomically favourable teeth without apical involvement is a highly successful procedure, using a standard technique. Treatment of teeth with periapical involvement in anatomically favourable cases is sufficiently successful to make it a safe procedure, with root amputation as a last resort if regeneration of bone is not complete after a reasonable lapse of time. In pulp removal, it is desirable to use pressure as a second choice only. The treatment of root canals must be considered as no different from treating an open wound in any other part of the body. It is a responsibility to be met with surgically clean methods of operating, a familiarity of root-canal anatomy, a study of tissue reactions, and a careful technique.

Graphology and Character

A Paper read before the Psychological Section of the Physical Society on 16th March, 1937, by M. Y. Mannheim, Esq., M.D.

MR. CHAIRMAN and GENTLEMEN, Graphology is the study of infering character from handwriting. Handwriting has always been looked upon as an expression of one's personality. This is not only proved by the importance attached to the signature in all legal and financial proceedings, but by the fact that everyone is able to recognise a friend's handwriting.

Edgar Allan Poe, Robert Browning, Goethe and others felt there was something in handwriting. Intuitive insight, which is a personal, uncommunicable gift, is far removed from a science which can be taught. It may be a long time before a new way of approach will be generally acknowledged. The first attempt to establish graphology as a science was made by Michon in 1872. Crépieux-Jamin and Ludwig Klages are the scholars to whom we owe the greatest debt of gratitude. It is due to them and others, such as Pulver and Saudek, that graphology has become separated, once and for all, from obscure activities such as fortune-telling and prophecy.

We are frequently asked about the underlying principle of graphology. To answer this question we have to point out that all our activities—speaking, walking, writing—serve not only a definite purpose, but display our personality as well. There is an expressive tendency in all human activity which is bound to show, though quite unconsciously. Even if we don't know it, all of us rely on the unconscious interpretation of gesture, the by-product of our activities. Important matters are discussed in personal interviews. A judge would never give his decision without having set eyes on the charged person and the witnesses.

The main reason lies in the fact that we rely less on words than on expressive movements, which, being unconscious manifestations, are comparatively independent of conscious intentions. Thus Nietzsche's utterance is well confirmed: "One may lie with the mouth, but with the accompanying grimace one nevertheless tells the truth." A good example which demonstrates the importance, the expressive vigour and the spontaneity of gesture is that of the conductor of an orchestra, for whom gestures are the only way of conveying his intentions and of uniting into a whole a number of persons of very different character. Where speech fails, expressive movements have immediate significance. *Handwriting is one's gesture fixed on paper.* The systems of writing vary a great deal in different countries and under the influence of different fashions. Once acquainted with a special system the graphologist has no great difficulty to find out whether a person sticks to a conventional system or writes in a more or less individual and personal way. Small children lacking a well-defined character and a distinct personality, and although being still preoccupied with the technique of writing and spelling, nevertheless show great differences in all parts of the writing. This is another proof of the difficulty of inhibiting expressive movements.

The nervous and muscular system has nothing to do with the faculty of writing, provided that organic affections are absent. Not the hand, but the brain writes. This is proved by Preyer's famous experiments. After some training, people learn to write with the left hand, with the toes of either leg, or by holding a pencil with their teeth. In those who have lost their right hand, the left-handed writing shows the same character, although the outward appearance of the writing may have changed.

In a brief survey we must limit ourselves to some general remarks, and cannot dwell on the method of graphology. We can easily test specific capacities, such as intelligence, attention and reaction-time, but we cannot test the personality by laboratory methods. Graphology claims to be a personality test.

It is not possible to split up a human personality as it is an organic unity and not a sum consisting of certain parts. We derive from the writing a general impression as from personal interviews or from works of art. This general impression has been termed "formniveau" by Klages. We arrive at the general impression, level or essence by being impressed by the genuineness, originality, productivity, vital fullness and vital intensity of a handwriting. Some experience is needed to get proper appreciation for the general quality of a writing, as experience is needed to know the genuineness of complaints or the quality of any work of art.

The level has not very much to do with formal faculties such as intelligence and certain special gifts.

Each graphological sign has at least two meanings. It is, therefore, impossible to make a list and to look up a book in order to get a definite quality for each distinct sign. The level helps us to choose the right meaning of a sign. In a handwriting of high level we may find firmness, yet the same signs will be interpreted as fanaticism in

a handwriting of a low level. It is necessary to say that very marked qualities are ascertained by *quite a number* of marked signs which must occur *frequently* before the quality can be inferred as important and characteristic. Of those signs which have a special importance we quote: the direction (vertical, slant or backhand style), width, speed, pressure, preference given to round or angular forms and connections, interval between words, size-ratio of long and small letters, flourishes and margin.

What are the results we can derive from graphology, admitting its significance as a personality test? We can ascertain the proportion of activity and impressionability of a person. Activity, energy, endurance, straightforwardness are the desire and the capacity to act, to produce, and to mould the surroundings. Impressionability is the capacity to be impressed, moulded and shaped. To know the ratio of activity and impressionability means to know a person's courage, activity and adaptability. We find at the bottom of many conflicts that either side may be deficient. Very important conclusions can be drawn from this knowledge, because we learn which side of the personality could possibly be developed.

Another faculty easily revealed by graphology is the ability to establish relationships. In psychotherapy we have to rely a great deal on a person's ability to establish contacts. Whatever method we use, relationship is the basis of psychotherapy. At the bottom of many anxiety conditions lies the inability to establish deep relationship, and as a result the patients are lonely, shy and reserved. We can even find out if their relationship is a genuine one or if they only project ideals and expectations on another human being, thus substituting wish-fulfilment phantasies for love. Graphology gives us certain evidence about the patient before we start treatment, and sometimes we know when to abstain from treatment, especially when the clinical examination is in accordance with graphological findings.

Graphology does not claim to be a substitute for the clinical examination. Our impression of a patient is liable to various deceptions. Some patients don't feel at ease when being interviewed. Others project their failures only on environmental factors, so that we never get information without a more or less subjective interpretation. A great asset of graphology is that its results are independent, firstly, of the personal impressions of the interviewer, and secondly of the subjective interpretation of the patients who often substitute pseudo motives (in which they honestly believe) for real conflicts of character.

Freud proved the importance of impressions in early childhood. If the patient's writing reveals him as an impressionable personality, we are entitled to attribute great significance to his early experiences; meanwhile a person with marked activity and rigidity would have had a predisposition to resist certain influences more or less. Graphology throws, therefore, a certain light on the question, *differing in each individual case*, whether innate tendencies or environmental factors have been predominant in shaping a certain character. If handwritings of parents, brothers and sisters are at our disposal, we arrive sometimes at an ideal reconstruction of the past. We can also find out whether a patient is likely to change his present condition or whether his character lacks adaptability to such an extent that the resulting rigidity makes it unlikely for him to undergo a change.

Graphology throws further light on the patient's self-estimation. Many patients are either discouraged and don't appreciate their qualities properly or they estimate themselves too highly and over-rate their abilities. What comes out in graphology is not the conscious self-estimation, but the *unconscious self-estimation*, which may lead to numerous conflicts if the patient cannot achieve what he urgently wants.

Character not being a rigid unity undergoes continued changes. We derive from handwriting the knowledge, whether or not, and to what extent, a treatment has been successful. In successful cases the changes are striking enough. In serious physical illnesses the writing deteriorates. The same holds true for all forms of psychosis where we see a definite change without being able to diagnose the form of the psychosis. In impressionable and emotional people the disposition of the writer comes out very clearly. We have, therefore, to ask for many letters in order to get the average handwriting.

Dealing with the limitations of graphology we have to point out that occasionally, due to the fact that some people are very restrained, expressive movements fail to appear in the writing. Another limitation is that graphology cannot forecast a person's actions. For every action there is not one leading motive, but the acting and underacting of a number of motives. We have, therefore, to abstain from foretelling a person's actions and from such moral judgments as reliability, honesty and trustworthiness. Another limitation lies in the fact that our insight, our understanding, is necessarily limited. We only understand another human being or his expressive movements if the person's character lies within the confines of our ability to comprehend.

Keeping within these bounds and restrictions, graphology claims to be the most objective path to the knowledge of character.

Correspondence

Women Medical Students

To the Editor of the GAZETTE

SIR,—I assume that Professor Ryle's enthusiasm for co-education is of recent origin and is based on his experience as a teacher of mixed classes at Cambridge. The subject, however, has to be considered from the point of view of the student as well as that of the teacher.

The whole of my scientific education at University College, 1884-1886, and at Cambridge, 1886-1891, took place in mixed classes. The number of female students was even then considerable. At the time, and looking back at it now, I am not conscious that we male students felt or gained any advantage from mixed classes. It was all the other way. To us the female students were a foreign element, a nuisance; they were in the way and there on sufferance. On occasions their presence was resented. It is not easy for a boy of eighteen to sit through a lecture on the copulation of elephants and not be disturbed by the consciousness that the audience is mixed.

This attitude of the male students certainly reacted on that of the other sex, many of whom suffered from various degrees of inferiority complex in consequence. For two years I lectured at Girton College to students for the Tripos, Part II. Nothing struck me more than the difference in the psychology of the two sexes of students, and how much better it was to teach female students by themselves.

For six years after the war I examined at the Conjoint, at a time when there was an enormous influx of female students, who formed at least a third of the candidates. Again the essential difference between male and female students was only too obvious.

My experience teaches me not only that Guy's has no good whatever to gain by the admission of a foreign element of female students, but also that nothing could be more disastrous to a small clique of female students than that it should be admitted to Guy's.

Yours, etc.,

A. P. BEDDARD.

149, Harley Street,
London, W.1.

To the Editor of the GAZETTE

SIR,—May I, and many other students, offer congratulations on your opposition to the suggestion that women should be admitted to this Hospital to study medicine.

It is not difficult to appreciate the widespread resentment and disgust caused by the introduction of a Foreign Body into the "Spit," and to realise that those who would prefer to work and relax in the company of women form an insignificant minority.

Yours, etc.,

R. C. PONDER.

Guy's Hospital,
S.E.1.

Clubs' Union Meeting

To the Editor of the GAZETTE

SIR,—I should be grateful if I may be allowed space in which to acquaint the members of the Clubs' Union with the decision reached at the recent meeting of the Council concerning the granting of financial aid to the expenses of tours.

After careful consideration it was decided that no grants could be allowed to any of the constituent clubs of the Union, with the exception of the Rugby Club. This step has had to be taken, unfortunately, because of the poor financial state of the Clubs' Union funds. Although a surplus of £200 was realised last year, the expected additional one this year has not been forthcoming, owing to the expense of further alterations and repairs necessary at Honor Oak Park, part of the alterations in the College, and other items, the chief of which has been the financial aid to tours of certain of the "winter" clubs. These expenses come to more than £700 and have upset the budget for 1936-1937. It has therefore been found impossible to grant any money to the "summer" clubs this year, and to any of the clubs in the future.

The reason for an exception being made of the Rugby Club may not be obvious to those who do not play, or to some of the many who have been disappointed with the Club these last few seasons. But normally this Club is the only one which brings in money to the Clubs' Union—in favourable years the amount is considerable—and usually the actual tours are guaranteed in part by the opposition. Guy's is famous for its rugger; that this fame is fading a little is unfortunate, and all Guy's men hope for better results in the near future. Tours of the Club may prove necessary to improve and keep up the standard of rugger, and to keep the Hospital in the forefront of first-class rugger; therefore each year the question of a tour will be discussed and, if considered necessary, financed by the Clubs' Union.

Yours, etc.,

IAN ROBIN,
Hon. Sec., Clubs' Union.

Guy's Hospital, S.E.1.

Fairy Story

PENELOPE, with big blue eyes,
By means of most seductive tricks
Contrived to head the list of chicks
Of whom there were, per annum, six
To enter into Guy's.
Penelope, within a day,
Had seen the way that things were run,
And there was going to be such fun
Endeavouring to get them done
In quite a different way.

And so, when tired of being coy,
Impersonating bits of fluff,
And thus persuading quite enough
Misguided males to do their stuff,
With altruistic joy
She settled down to show these males
The value of that subtle touch
That makes the world go round so much
(And female common sense is such).
It simply never fails.

The Externs' Room was perhaps the thing
She looked on as the worst disgrace,
And, horror on her pretty face,
Had mauve distemper put in place
Of gruesome panelling.

She next called Surgery to heel.
The take-in firm, grotesquely staid,
And also thoroughly afraid,
At her command installed a maid
To cook the evening meal.

The Reading Room contrived to grieve
Penelope, as it had been
Since, roughly, 1817;
And in came *Woman's Magazine*,
Britannia and Eve.
And gradually the men, for whom
Penelope improved the Spit,
Began to disappear a bit.
The only place where they could sit
Was in the P.M. Room.

And thus astonishingly soon
The Park, the Quad, the Colonnade,
Became a sort of grand Parade
Of girls amazingly arrayed,
And fashion called the tune.
And now the Hospital we hear
Is packed with femininity.
The date is 1983;
The female Staff, broadmindedly,
Accept six men a year.

D. A. G. B.

Sport

Rugby

SEASON 1936-37

THE season of 1936-37 being completed, I have pleasure, as in past years, in enclosing chart and statistics of the 1st XV.

Last year's figures were disastrous, but this past season's figures have, I am afraid, broken all records, the percentage being only 22.0. One more game was played than last season, the total being 34, of which 4 were Hospital Cup games.

One game (*v.* Coventry) was scratched, and the game against the Old Cranleighans was abandoned.

With regard to the points, there is a drop of 71 points compared with last season's figures, while our opponents scored 124 more points against us; in fact, the number of points scored against us (608) is much the highest number of points scored against any "Rugger" side this season.

The number of games won was 7.3 less than last season.

We played through the Hospital Cup ties and reached the Final, but were unable to wrest the Cup from St. Mary's, they beating us in the Final after a hard game (4—11). Last year, it will be remembered, they beat us in the semi-final.

We failed to score on 7 occasions, while our opponents only failed on one occasion (*v.* Old Leysians).

Our highest score was 31 points against St. George's in the Cup, and in Club games 13 points against London University.

The highest score against us was 40 (twice), once by Gloucester and once by Birkenhead Park. Birkenhead Park in the two games we played with them took 77 points from us.

It should be noted that the captain (Dick) played for Scotland against Wales, and would have played in all Scotland's games but for the fact that he was injured.

Forty-four players have taken part in 1st XV matches, as follows:—

Nicholson* (31), Kark* (30), Crawford* (28), Williams, Crabb* (27), Darke,* Dick* (25), Lewis* (23), Forbes,* Walt* (22), Baxter* (20), Birks,* Fletcher* (19), Allen, Steytler* (16), Sharp (14), Halamandres,* Robin* (13), Yerbury

GUY'S HOSPITAL R.F.C.

SEASON 1936-7

93rd Season

Average Points per Game (For) 6·32

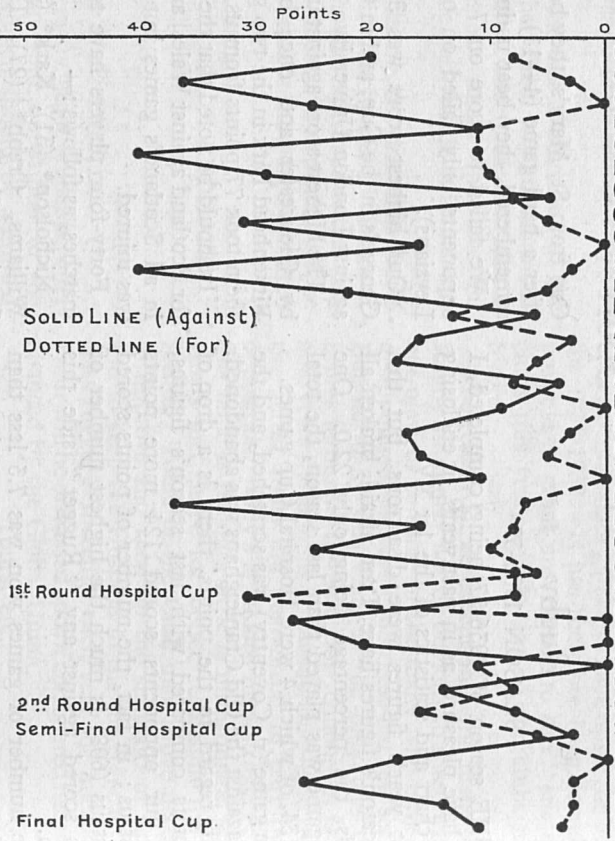
Total Points (For) 215

Average Points per Game (Against) 17·88

Total Points (Against) 608

PLAYED	WON	DRAWN	LOST
34	7	1	26

Percentage 22%



O	OPPONENTS	DATE	Gd	SCORE F	A	GI T For	GI T Against	GOALS	TRIES
	Catford Bridge	1936 Sept. 19	H	8	20	1	2+ 4	Dick	Wright, Fletcher.
	Coventry	" 26	A	3	36	–	1 5✤ 4		Wright.
	United Services	Oct. 3	H	–	25	–	– 3+ 4		
	Devonport Ser.	" 10	H	11	11	3‡	– 1 2	Kark 3 ++	Wright.
	Gloucester	" 17	A	11	40	1	2 6+ 4	Kark	Wright, Stanyan-Jaques 2.
	Harlequins	" 24	H	10	29	2	– 5+ 2	Kark 2	Wright 2.
	Old Alleynians	" 31	H	8	5	1	1 1 –	Kark	Stewart, Dick.
	Cambridge Unv.	Nov. 4	H	5	31	1	– 5 2	Kark	Fletcher.
	Old Blues	" 7	H	–	16	–	– 2 2		
	Birkenhead Pk.	" 14	H	3	40	–	1 7✤ 2		Wright.
	Rosslyn Park	" 21	A	5	22	1	– 2 4	Kark	Yerbury.
	London Unv.	" 25	A	13	6	2	1 – 2	Kark 2	Van Steytler, Walt, Drew.
	Aberavon	" 28	A	3	16	–	1 2 2		Lewis.
	Richmond	Dec. 5	H	6	18	–	2 2✤ 3		Wright, Dick.
	Army	" 12	H	8	4	1	1 1✤ –	Kark	Dick 2.
	United Services	" 16	A	–	9	–	– – 3		
	Liverpool	" 19	A	3	17	–	1 1 4		Birks.
	O.M.T.S.	1937 Jan. 2	A	5	16	1	– 2 2	Kark	Morley.
	Waterloo	" 7	A	–	11	–	– 1 2		
	Birkenhead Pk.	" 9	A	7	37	1✤	1 5 4	Allen ✤	Morley.
	Liverpool Unv.	" 11	A	8	16	1	1 2 2	Kark	Crawford, Hartley.
	Cambridge Unv.	" 27	A	10	25	2	– 2 5	Kark 2	Crawford, Nicholson.
	Gloucester	" 30	H	6	8	–	2 1 1		Hartley, Walt.
	St. Georges Hosp.	Feb. 4	N	31	8	2	7 1 1	Kark 2	Hartley 2, Birks 2, Lewis, Darke, Allen 2, Baxter.
	Devonport Serv.	" 6	A	–	27	–	– 4+ 3		
	Royal Air Force	" 10	H	–	21	–	– 4+ 1		
	Old Leysians	" 13	A	11	–	1	2 – –	Dick	Dick 2, Birks.
	Old Millhillians	" 20	A	8	14	1	1 1 3	Dick	Darke, Dick.
	Charing Cross Hos.	" 25	N	16	8	2	2 1 1	Kark 2	Allen, Baxter, A.H. Other 2 ✻
	St. Thomas's Hosp.	Mar. 2	N	6	3	2‡	– – 1	Kark 2 ++	
	Aberavon	" 6	H	–	18	–	– 3 1		
	Bedford	" 13	A	3	26	1+	– 4 2	Kark +	
	Old Pauline's	" 20	H	3	14	1+	– 2+ 2	Kark +	
	St. Mary's Hosp.	" 24	N	4	11	1✤	– 2+ 1	Steytler ✤	

✻ Tries scored in scramble on Line.

Dropped Goal ✤ Penalty Goal +

(12), Finnigan (11), Wright (10), Hartley (9), Stewart, Stanyon-Jaques, Saunders (8), Morley (7), Drew, Ziervogel (6), Rowley (5), Douglas, Melton (4), McCall, Ellis (3), Crampton, Davies (2), Chapman, Jones, Plowman, Gregory, O'Gorman, Cole, Sechiare, Burnford and McClinton (1) each.

The players marked * played in the Hospital Cup Final.

The following have scored tries :—

Wright (8), Dick (7), Birks, Hartley (4), Allen (3), Darke, Baxter, Fletcher, Stanyon-Jaques, Walt, Lewis, Morley, Crawford and A. N. Other (2), Nicholson, Stewart, Yerbury, Steytler, Drew (1).

The following scored goals :—

	Tries Converted.	*Penalty Goals.*	*Drop Goals.*
Dick	3	—	—
Kark	18	6	—
Allen	—	—	1
Steytler	—	—	1

making a total of 49 tries, 21 tries converted, 6 penalty goals, and 2 dropped goals. Total, 215 points.

Our opponents' score was as follows :—144 tries, 68 tries converted, 8 penalty goals, and 4 dropped goals. Total points, 608.

Therefore the completed figures are :—Played 34, won 7, drawn 1, lost 26. Points (for), 215 ; points (against), 608. Average points per game (for), 6.32 ; average points per game (against), 17.88. Percentage, 22.0.

The following table gives the records from 1920-21 :—

Season.	*P.*	*W.*	*D.*	*L.*	*Points. F.*	*A.*	*Per cent.*
1920-21	27	19	2	6	600	96	74.07
1921-22	35	26	2	7	467	162	77.0
1922-23	32	19	4	9	343	203	65.62
1923-24	27	13	3	11	285	151	53.4
1924-25	31	16	3	12	291	230	56.45
1925-26	29	14	3	12	235	234	53.5
1926-27	34	18	3	13	371	294	57.35
1927-28	26	12	3	11	190	206	52.0
1928-29	30	11	1	18	220	404	38.3
1929-30	28	12	1	15	322	311	44.7
1930-31	28	13	2	13	306	289	50.0
1931-32	28	14	0	14	295	324	50.0
1932-33	30	14	1	15	347	347	48.3
1933-34	32	14	2	16	355	373	46.87
1934-35	30	10	1	19	287	518	35.0
1935-36	33	10	1	22	286	484	31.8
1936-37	34	7	1	26	215	608	22.0

ROY C. HOLLOWAY,
Hon. Life Member, G.H.C.U.

Association

TOUR IN GERMANY

DURING the Easter week-end the Association Football Club, through the generosity of the Club's Union, were able to arrange their first tour.

Leaving Victoria on Thursday evening, the seventeen members of the party still managed to arrive at Cologne together at mid-day on Friday, to find a large crowd waiting to greet them.

The afternoon and following morning were spent in looking around Cologne in company with the hosts of the Club, the Sportklub Schwarz-Weiss.

The first match was played that afternoon at 5 p.m. against the Sportklub Schwarz-Weiss, and the first view of the pitch was not reassuring, for it consisted mainly of " clinker." To the accompaniment of fanfares and cheers from a large crowd, the teams took the field. Then followed the two National Anthems and speeches of welcome, and our startled captain was presented with a large bouquet of flowers.

For the first fifteen minutes Guy's were busily defending on a strange surface, and the German team were soon one goal up. Soon after this, Lee was injured and was off the field for some ten minutes, and returned to play on the left wing. During his absence the home team scored a second goal.

Following this setback, Harvey made progress on the right wing and shot. The goalkeeper caught the ball, but Dorr, following up strongly, knocked him and the ball into the net. Snow began to fall heavily, and good ball-control was impossible. Just before half-time the Sportklub Schwarz-Weiss scored for the third time.

The half-time interval was prolonged for half an hour in the hope that a violent snowstorm would pass over, but in vain. However, in order not to disappoint the keen crowd, a short second half was played, under deplorable conditions. During this half the Hospital kept play almost entirely in their opponents' half of the field, and midway through the half they were awarded a penalty, and Heap made no mistake with a hard drive.

Towards the end Sprigings had to leave the field with cramp, and the game ended with the Hospital pressing hard, but with no further score.

After the game a most enjoyable reception followed, which continued almost until the party left for Troisdorf at mid-day on the Sunday.

On arrival at Troisdorf it seemed as though the whole town were at the station, it being the first occasion on which an English team had visited that town.

After lunch there followed a coach ride up the Rhine as far as the Seven Mountains, where the party had tea at an hotel overlooking the Rhine. Then most of the party climbed the Drachenfels and afterwards returned to Konigswinter for supper.

The second game was played *versus* Troisdorf on the Monday afternoon. Unfortunately, Guy's were weakened by the absence of Lee and the fact that three other players had to play with injured knees. In addition, the home team's centre half, centre-forward, and outside-left had all played for Germany.

The German team began to attack from the kick-off, and after ten minutes their inside-left opened the scoring. Guy's kept playing hard, but after twenty minutes the German centre-forward scored a second goal. Play was more even after this, but Troisdorf were much quicker on the ball. However, Sprigings scored for Guy's from a through pass by Rees. There was no further scoring before half-time.

About three minutes after the interval the Troisdorf inside left again scored. Their lead was soon reduced when Heap converted another penalty. For the next twenty minutes play took place almost entirely in the Guy's half, and the German team scored three goals in ten minutes, and later scored another about ten minutes from the end of the game.

After the game, the party was entertained to another enjoyable evening, during which souvenir-hunting became almost an obsession, and members of the Guy's party gradually acquired more and more badges on their coat lapels, and the writer noticed that a large Nazi flag had suddenly disappeared from the wall beside the Union Jack. However, the Troisdorfers were doing their share of souvenir-hunting, and there must be a large number of Guy's ties worn in Troisdorf to-day. Two members of the Guy's party actually returned home without ties, and one was minus collar and studs as well.

However, at midnight farewells were said, and one member of the Guy's party was actually in tears as the coach left Troisdorf *en route* for Cologne.

The outstanding features of the tour were the amazing hospitality and friendliness shown towards the party, and also the sporting spirit in which the two games were played.

Swimming Club

THE Guy's Hospital Swimming Club held its Annual General Meeting in Classroom 4 on Tuesday, March 18th, at 4.30 p.m. Mr. T. B. Layton, the President, was in the Chair.

The Minutes of the 1936 annual general meeting were read and confirmed.

The officers for the coming year were then elected. Mr. J. A. R. Smit, who has captained the Club for the last two years, had resigned, and Mr. A. M. McCall, last year's secretary, succeeds him in that office. A. J. Drew becomes secretary, with K. R. Titford as assistant secretary.

The committee were elected as follows: 1st year, J. A. Powell; 2nd year, S. P. Vorster; 3rd year, C. Halamandres; 4th year, P. Morrell Thomas; 5th year, A. M. Edwards; Any year, J. A. R. Smit.

It was suggested by A. M. McCall that the Club this year hold a tour to Jersey during the summer, details being left to the committee to settle. A dance at the Club Pavilion at Honor Oak Park on Friday, June 18th, will be organised to provide the funds necessary to make the tour possible. It is to be hoped that this dance will be well supported. Tickets will probably be not more than 4*s*. each.

Other business included discussion of a letter from the London University Swimming Club and the rules of the United Hospitals' Swimming Club, and the meeting closed at about 5.20 p.m.

The Committee take this opportunity of welcoming all new students to the Hospital, and cordially invite those who are swimmers—good or indifferent—to make themselves known as soon as possible to a committee member, and to come along to Lavington Street Baths (five minutes' walk from the Hospital) any Friday afternoon at 5 o'clock, when they will be able to meet the more enthusiastic members of the Club at practice.

K. R. T.

Water Polo

THE Hospital team had its first match of the summer season on Wednesday, April 21st, when it met Woodside Swimming Club at the Norwood Baths. Guy's won by 5 goals to 1 after a very enjoyable match.

The team as a whole combined well, and each player made the most of his opportunities, the backs breaking away well on several occasions. The snappy shooting of J. A. R. Smit and Morrell-Thomas was conspicuous, both securing two goals. The fifth was netted by McCall after a gallant swim up the bath.

J. Crone, in goal, had little to do, but was sound, the only ball to pass him being the result of an unfortunate misunderstanding between himself and K. R. Titford at half-back, giving R. Oakes, of Woodside, a chance which he did not miss.

Team.—J. Crone, A. M. McCall (Capt.), T. Weston, K. R. Titford, S. P. Vorster, P. Morrell-Thomas, J. A. R. Smit.

K. R. T.

GUY'S v. LENSBURY S.C.

ON Friday, April 30th, Guy's put a weakened team into the water against Lensbury Swimming Club, and, as a consequence, were beaten 5 goals to 1.

The team played quite well in the circumstances, but could not keep Lensbury's goal-score down, in spite of some splendid work by J. Crone in goal. As the score indicated, defence was the weakest spot. Apart from a good long shot by S. P. Vorster, in scoring our only goal, Guy's shooting seemed rather half-hearted, most players tiring quickly, possibly through lack of practice. However, this result is not representative of the Hospital's true standard of water-polo.

Team.—J. Crone, A. Powell, A. M. Edwards, T. Weston, J. Bulstrode, S. P. Vorster, A. J. Drew, J. A. R. Smit (Capt.).

K. R. T.

Golf

GUY'S v. WIMBLEDON PARK

ON Wednesday, 14th April, at Wimbledon Park, Guy's met the Wimbledon Park Golf Club and were defeated by 6½ matches to 1½. Results were as follows :—

Guy's		*Wimbledon Park*	
B. C. M. Reed (Capt.)	0	G. F. Stapleton-Harris (5 & 4)	1
R. D. Allen	0	Stanley Davis (7 & 6)	1
T. N. Praat (halved)	½	R. E. Charrington (halved)	½
A. E. Parrott	0	V. B. Durrant (4 & 8)	1
P. Wilson (3 & 2)	1	A. Matthew	0
P. D. Spooner	0	C. W. Mulberry (6 & 4)	1
A. L. Young	0	F. Howett (Capt.) (2 & 1)	1
T. L. Clark	0	J. S. Blake (4 & 3)	1
Total	1½	Total	6½

GUY'S v. ADDINGTON PALACE G.C.

THE Guy's Hospital Golfing Society were entertained to a match by the Addington Palace Golf Club on Wednesday, 21st April, and were defeated by 5½ matches to 2½. Results were as follows :—

Addington Palace G.C.		*Guy's*	
D. Taylor Smith (8&7)	1	B. C. M. Reed	0
H. T. Robbins	0	S. M. Whitteridge (1 hole)	1
F. S. A. Baker (4 & 3)	1	P. Wilson	0
A. C. Dodd	0	T. N. Praat (5 & 4)	1
H. Murray Sly (1 hole)	1	P. D. Spooner	0
L. E. Martin (4 & 3)	1	T. L. Clark	0
E. P. Bisley (2 & 1)	1	P. E. Deverall	0
R. R. Kerr	½	K. A. Stanyon Jaques	½
Total	5½	Total	2½

GUY'S v. BART.'S

ON Wednesday, April 28th, Guy's Hospital Golfing Society played St. Bartholomew's Hospital Golfing Society at Addington Palace, and a very exciting game ended in a draw at 4 matches all. Results were as follows :—

Guy's		*St. Bartholomew's*	
R. D. Allen	0	H. J. Robbins (6 & 5)	1
P. Wilson (4 & 3)	1	A. L. Frazer	0
B. C. M. Reed	0	A. H. Thompson (1 hole)	1
S. M. Whitteridge (1 hole)	1	Knill Jones	0
T. N. Praat	0	R. B. Halford (5 & 4)	1
P. D. Spooner	0	G. K. Marshall (6&4)	1
K. S. MacLean (1 hole)	1	A. L. Ackroyd	0
P. E. Deverall (1 hole)	1	R. S. Russell-Smith	0
Total	4	Total	4

Hospital Information, etc.

Notices

THE THIRTY CLUB

The Fifteenth Annual Dinner of the Thirty Club was held on October 24th, 1936, at the Trocadero Restaurant. Forty members and seven guests were present. The sum of £101 was subscribed by members of the Thirty Club and paid over to the Guy's Appeal Fund.

The Sixteenth Annual Dinner of the Club will be held on Saturday, October 2nd, 1937, at the Trocadero Restaurant, the Chairman being Dr. Eric Biddle. Members of the Club are asked to make a note of the date and a notice of the Dinner will be sent out in early September.

ASCOT

Park your car at private house overlooking course on Windsor-Ascot Road. 5*s.* per day. All proceeds to Guy's Hospital. Apply Appeal Secretary.

PUPILS' PHYSICAL SOCIETY

AT a Committee Meeting held on May 5th the following decisions concerning the Society's Prizes were made :—

The Treasurer's Prize Essay for 1936-37. Subject : " The Development of Medical Thought in the Nineteenth Century as exemplified by the Gordon Museum." Open to members of the Society, qualified or unqualified. Essays are to be handed in by September 1st. The Prize Essay will be read early in the new season.

The Beddard Prize for the member who most distinguishes himself in the demonstration of clinical cases was not awarded.

The Laidlaw Prize was awarded to R. H. S. Thompson, Esq., for his paper on " The Relation of Vitamin B to Peripheral Neuritis."

H. J. B. ATKINS,
C. G. BAKER,
Hon. Secretaries.

Pass List

CONJOINT BOARD.
FINAL EXAMINATION.
April, 1937.

Pathology.

A. K. Borland
J. D. Buckner
L. H. Cooper
A. W. J. Craft
S. S. Davidson
W. J. Drummond
D. I. Evans
E. S. Foote
S. D. Hankey.
H. M. R. Knight
A. S. Lee
A. L. Myburgh
J. R. Oliver
F. M. Smith
T. H. Steele-Perkins
R. W. Stevenson
C. F. Wright

Medicine.

*R. O. Barber
*J. C. A. L. Colenbrander
*N. C. Creighton
*A. R. Darlow
A. G. Dabbs
*V. Drosso
*J. D. Ebsworth
*S. Garnjana-Goonchorn
*G. James
*G. M. Johnson
*J. R. Kilpatrick
*A. R. Leask
*A. E. Loden
O. P. Llewellyn
*S. H. Raza
W. R. Russell
*R. J. Simms
*H. Stoll
*I. E. J. Thomas
*L. C. Thomson
C. R. Tilly
*S. I. Williams
*A. D. Willis
*F. A. J. Woodland
*A. S. Woolstone
*R. O. Yerbury

Surgery.

*E. W. O. Adkins
*R. O. Barber
L. B. Blomfield
J. D. Buckner.
N. J. Burnand
*J. C. A. L. Colenbrander
C. D. Farris
*H. E. W. Hardenburg
*G. James
*J. R. Kilpatrick
B. Maddison
C. N. Mills
*C. S. Pitt
*S. H. Raza
*R. J. Simms
I. Singh
*H. Stoll
W. G. Tillmann
*R. O. Yerbury

Midwifery.

M. R. Blair
A. K. Borland
A. Crook
I. G. B. Drybrough-Smith
D. I. Evans
C. L. Kimelberg
A. S. Syed
L. P. Symons
W. G. Tillmann
A. C. R. Wakeman
D. S. Wilson

ROYAL COLLEGE OF PHYSICIANS.
M.R.C.P.
April, 1937.

M. R. Kark
H. M. Kelsey

SOCIETY OF APOTHECARIES OF LONDON.
FINAL EXAMINATION.
April, 1937.

Surgery.

A. A. Beazeley
*P. H. Denton
W. G. Tillmann

Medicine.

*P. H. Denton.

Forensic Medicine.

*P. H. Denton.

Midwifery.

J. B. Good.

* Have now completed the examination.

Papers by Guy's Men

Martin S. Spink. Arabian gynæcological, obstetrical and genito-urinary practice illustrated from Albucasis. *Proc. Roy. Soc. Med.*, 1937, xxx, 683 (*Sect. Hist. Med.*).

R. W. B. Ellis. Diaphragmatic hernia of traumatic origin in a child. *Ibid.*, 758 (*Clin. Sect.*).

P. M. F. Bishop and H. W. Barber. Keratoderma clinactericum (Haxthausen) treated with Œstrone. *Ibid.*, 738 (*Sect. Dermat.*).

Frank W. Law. Two cases of " Post-influenzal blindness." *Ibid.*, 704 (*Sect. Ophthalmol.*).

A. M. Zamora and Another. Vascular adenoma of the bronchus. *Jour. Laryngol. and Otol.*, 1937, lii, 337.

Adolf Schott. On the value of electrocardiogram in general practice. *Practitioner*, 1937, cxxxviii, 603.

G. Payling Wright and Another. The absorption of animo-acids and their distribution in the body fluids. *Jour. Phys.*, 1937, lxxxix, 269.

H. St. John Rumsey. Facts and theories about stammering. *Jour. State Med.*, Vol. xlv, No. 2.

—— The treatment of stammering. *Med. Times*, Vol. lxv, No. 2315.

Guy's Hospital Reports.

April, 1937, No. 2, Vol. lxxxvii (Vol. xvii, 4th Series).

Contents.

John A. Ryle and T. Izod Bennett : Report on the after-histories of one hundred and twenty healthy men examined with the fractional test-meal.

W. N. Mann : Experiments on the neutralisation of hydrochloric acid by magnesium trisilicate.

Eduardo Etzel : Megaœsophagus and its neuropathology.

J. C. Colbeck, Arthur F. Hurst and G. A. M. Lintott : Regional ileitis (Crohn's disease).

Arthur F. Hurst and F. A. Knott : Regional colitis.

Arthur P. L. Tsu : The effect of Metheramine on biliary infection, with special reference to the Hurst regimen.

Maurice Campbell : Paroxysmal tachycardia in infants.

Adolf Schott : Dissociation with interference of the heart.

C. Lambrinudi and T. T. Stamm : Letters on orthopædics by W. H. Trethowan.

H. J. B. Atkins : A case of mesenteric thrombosis with recovery.

W. E. Herbert : Results of root resection.

Births

PITT-PAYNE.—On February 21st, 1937, to Mabel, wife of Dr. L. G. J. Pitt-Payne—a daughter.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

SINCE our last issue, London has seen a momentous week of pageantry, and the King and Queen of England have been crowned amidst scenes of jubilation that not even the wettest day of a very wet month could damp, and all London has been bedecked with bunting by day and illuminated by night.

Judging by the attendances on the Front Surgery, some of the visitors have also been, as it were, lit up, but now most of this is over; the crowds are going home, the decorations are coming down, the hundreds of tons of sodden paper deposited by the multitudes have been removed, the last banana skin picked up, and London is looking more like its normal self, save for the fact that there are still no buses.

Here at Guy's, of course, the Coronation caused no great stir; the patients listened to the wireless, a few flags were at the last moment attached to the outside of the Surgical Block, and the whole proceedings treated as if with mild toleration. Indeed, the only incident of the day was the discovery of two men sleeping in St. Thomas's House, who, it is believed, offered the excuse that they had stayed here all night to photograph the Matron on her way to the Abbey. Of course nobody believed that one, but we know that Lord Nuffield, Mr. Eason, the Matron and others set out at an early hour, and as we stood alone with the Founder in the Quadrangle to watch the great ones go, we seemed to see the old man turn towards the Court Room, so splendid was the scene and so great the occasion. For ourselves, we crawled away to tickle the cat's-whisker and hope that for once the electric lifts and great chunks of barium, gurgling in and out of diverticuli in the X-ray Department, would not entirely obliterate the broadcast.

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NOTHING has given us greater pleasure lately than the news that Dr. Hurst has received a Knighthood in the list of Coronation Honours, and we feel sure that all our readers will join with us in offering our most sincere congratulations to him on this distinction.

It is difficult, perhaps, for those of us who are rarely outside the Hospital to realise how far round the world Dr. Hurst's name has gone, but in the thirty-six years since he came here from Oxford he has built up an academic record which, both from the quantity of work he has done and from the widely differing branches of medicine upon which he has become an authority, is justly deserving of the term "brilliant."

Dr. Hurst came here from Magdalen College, Oxford, with an Entrance Scholarship, and proceeded to win most of the prizes that were available, including, in the summer of 1904, the Treasurer's Gold Medal for both Clinical Medicine and Surgery. He became the Radcliffe Travelling Fellow in 1905, and studied in Munich, Paris and America, before he became an Assistant Physician to the Hospital, with charge of the Electrical Department, in 1907. Later he took over the Neurological Department, and his work here, and that later still at the Seale Hayne Military Hospital after the war, have combined to establish him as one of the foremost authorities on nervous diseases, and on one occasion he went to America as the representative of the War Office at the Congress of the American Neurological Society.

It was in 1918 that Dr. Hurst was appointed a full Physician to the Hospital, and his output of work in many branches of medicine since then has been enormous, but it is perhaps for two things especially that he will be famous for all time, in the eyes of anyone who has heard of this Hospital, and those are his memorable Combined Rounds and his Editorship of the *Guy's Hospital Reports*.

All this may sound as if we are anticipating Dr. Hurst leaving us, but we are thankful that he has still several more years here, and in these lines we merely attempt to emphasise the value of

his work for the Hospital, and of his great services to the profession as a whole. For these services he was awarded the Osler Memorial Medal in 1935, and this month received his knighthood from the King.

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ALSO in the Coronation list of Honours we were delighted to see that Wing-Commander A. F. Rook, M.R.C.P., has been decorated with the O.B.E. for Military services. Wing-Commander Rook qualified here in 1915 and as well as holding the appointment of Resident Obstetrician, he worked in the Neurological Department for some time. We congratulate him on his distinction.

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IT will be some time before the final results of the Hospital Week Appeal is known, but from the first figures which have reached us it will be seen that all concerned in the Guy's effort have much cause for self-congratulation.

Some nine hundred collectors took the field on May 4th, and returned with the sum of £1,560 9*s*. 1*d*.—a really magnificent effort when one considers the very small area in which they could operate. We were very doubtful whether it would be possible to approach the figures of previous years, when we had canvassed a very large part of London, including the West End. However, everybody concerned rose to the occasion in so spectacular a manner that Guy's not only reached the highest total attained in any previous year, but exceeded this by several hundred pounds. Of the gross sum above mentioned Guy's will receive £1,033 15*s*. 7*d*., to which will later be added a further amount depending upon the amount of the expenses incurred. Our collectors, among whom were medical and dental students, nurses, girls of the Massage Department, ex-patients and friends of the Hospital, will derive some satisfaction in noting that our total exceeded that of Bart.'s, which had a larger collecting area, by over £500, and that of the London Hospital by £1,000.

The Appeal Secretary, who was in charge of the whole organisation and is, therefore, to be especially commended, has asked us to convery his thanks to all who made this collection such a success. This we do, and would add our own congratulations to his.

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ONCE again we publish on another page, letters which we have received about Professor Ryle's recent proposal that we should accept women students at this Hospital. We have stated our own views clearly and often enough not to warrant any repetition here, but we feel thankful that a very definite number of our readers seem to share our views to some extent, and, though we have never ceased to admire Professor Ryle for his boldness in making this revolutionary suggestion, we hope most profoundly that it will remain in history just as it is—merely a suggestion.

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NOW of course no one will believe us when we tell this tale, but for some time before the great day of celebrating the Coronation arrived, certain public-spirited gentlemen in the Hospital looked about for a method of livening up the day for those unfortunates who were forced to spend it within these grimy walls. With little hesitation, they decided that the most suitable means of honouring their Majesties would be to extend the licensing hours of the College to cover the whole day, and, with a certain amount of trouble, the authorities succeeded in obtaining the necessary permission.

However, walking into the Dining Room on that afternoon, thirsty and fatigued with listening-in to so many cheering people, our observer was told that he could not possibly have a drink as it was out of hours, and no amount of explanation to the acting manageress of the Catering Company would do any good. The manageress herself, of course, was away, but her deputy was quite certain that she had received no licence for an extension, and, in point of fact, she was right, for, though the licence had been obtained all right, it still remained with the manageress herself, and for all we know, and for all the use it was to the Residents, it may well have been in her pocket watching the procession.

Such a mistake seems to us to be typical of the incompetent management of the whole of the Catering Company, and we would suggest that it is time some sort of serious investigation took place into the continuous maladministration of this enterprise, which is becoming something more than a nuisance.

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NOWADAYS commercial advertising has reached such a pitch that there is scarcely a physiological function of the body that is not, at one time or another, indicted as the cause of some offence against society. The teeth ("halitosis—your best friend won't tell you "), the weight (" lose pounds of ugly flesh "), and many more of the commoner ills of life are placarded daily before the public in the popular press, but it was only recently that we learned of the extent to which these popular slogans have penetrated into the minds of some. For, on one of those gigantic documents which contain a short dossier of each patient in a ward, for the benefit of the night staff, we found a certain patient reported on with the somewhat cryptic remark of " No B.O. to-day." The precise meaning of this remark is a little obscure, but we suppose that the patient had just come in, wondering why no one would dance with him.

Hydrocele of the Tunica Vaginalis

Report on Cases of Vaginal Hydrocele from the Genito-Urinary Department at Guy's Hospital from the years 1910 to 1936, by A. Ralph Thompson, Esq., Ch.M., F.R.C.S.

THE material on which this report is based is gathered from post-mortem reports at Guy's and the London Hospital, the former from the years 1890 to 1909, and the latter for the years 1909 and 1910; also from the clinical notes of cases occurring in the Genito-Urinary Department at Guy's Hospital from the years 1910 to 1936 inclusive.

The interest of vaginal hydrocele may appear to be very limited, but it is quite clear that many cases are not studied sufficiently as to the possible cause of the condition, and it is in an attempt to elucidate these causes that the main interest of this paper will lie.

At the beginning of this paper, it may be well for the statement to be made that the reporter had some clear ideas as to the production of effusions of clear fluid in the pleural cavity, thanks to the teaching of Sir Cooper Perry, whose powers of instruction at the bedside were incomparable, but it was considered that, perhaps, more valuable opinions than those of a specialist in urinary surgery might be more worthy of consideration on this subject when supplied by a physician who definitely has knowledge of pleural conditions. For this reason certain definite questions were put to Dr. Geoffrey Marshall, and he very kindly and promptly answered them, and for this courtesy the writer is much indebted to him. There are three serous cavities in the body, namely, the peritoneal, the pleural, and the tunical vaginalis. Now it is true to say that no diagnosis of a pleural effusion would ever be made without some cause being sought for, and a similar remark may be made with regard to a peritoneal effusion, but, unfortunately, very small efforts are made to discover a possible cause of hydrocele, and this may account for the very inefficient treatment that is performed in so many cases, as evidenced by the frequent recurrences after such treatment as tapping the hydrocele. Dr. Marshall's opinions will now be quoted under date 24th September, 1936.

1. A clear non-purulent pleural effusion may develop in association with tuberculous disease of the corresponding lung, even when the tuberculour process spreads to the surface of that lung.

2. A clear pleural effusion is often the first indication of tuberculosis of one or other of the lungs, sometimes of the corresponding lung, sometimes of the contralateral one.

3. A clear pleural effusion not infrequently occurs with carcinoma of the bronchus, even when the growth is a long way from the surface of the lung.

4. Clear pleural effusions are also often seen with secondary deposits on the surface of the lung.

These opinions on pleural effusion confirmed and strengthened my own views on the subject, and they became very interesting in connection with the production of a vaginal hydrocele.

The cases will now be considered, and it seems well, in order that confusion may be avoided, to number them consecutively, and they will be divided into the two classes of Autopsies and Clinical Cases. The Autopsies will now be noted. But the caution of H. G. Sutton stated in his work on "Medical Pathology," which was published in 1886, may here be inserted: "There are many causes of Disease; we can never say there is one cause of Disease—therefore it is exact to say, 'this Disease has arisen in these conditions.' As much as possible in thinking about Pathology endeavour to get rid of the word 'Cause.'"

Sometimes, however, associated conditions may be present so emphatically that it is difficult for anyone to deny their action as causes, and whilst I quote, and warn my readers of Sutton's advice, it is impossible for one to refrain from regarding associated conditions as possible, or even probable, causes.

The Autopsies may be classified as follows (the classification is based upon the chief associated condition that was present in each case, and these conditions appeared to be in many instances actually causative):—

1. Acute local infection.
2. Local urinary sepsis:—
   - *a*. Phimosis.
   - *b*. Stricture urethræ.
   - *c*. Prostatic gravel.
3. Local syphilis.
4. Inguinal hernia.
5. Cancer of rectum.
6. Cancer of cæcum.
7. Appendicitis.
8. Cirrhosis of liver.
9. Splenic leukæmia.
10. Purulent meningitis.
11. Pneumonia.

Reparative processes occur in a vaginal hydrocele, and to this matter attention may be directed after the associated conditions have been considered. It will be seen later in the description of the Clinical Cases that this list may have to be modified, but the main principle of it will remain.

AUTOPSY CASES

1. *Acute Local Infection.*

Autopsy 1. Aged 61. Woke up with pain in side of scrotum and the groin. No history of venereal disease or of injury. Testis epididymis and cord are hard, and there is a hydrocele. In spite of multiple incisions the inflammation spread, and the scrotum became gangrenous and death followed.

2. *Local Urinary Sepsis.*

a. Phimosis.—Autopsy 2. Aged 19 months. Phimosis and a small hydrocele on the left side. Death from whooping cough and pneumonia (bronchial).

b. Stricture Urethræ.—Autopsy 3. Adult age. Admitted with suppurating hydrocele, and this was incised, and a catheter was tied in the urethra. This is a most dangerous step to undertake. In such a case the bladder should be opened supra-pubically, and the urethra should not be touched. Patient died six weeks after the operation from broncho-pneumonia.

Although there was no active inflammation in either kidney, the cortex in both was found to be atrophied. Granular cystitis was present, and there was a long stricture in the membranous and penile parts of the urethra.

c. Prostatic Gravel.—In the *Guy's Hospital Reports* of 1929 I drew attention to the septic nature of stones in the prostate, so that the succeeding notes are interesting as supporting this view :—

Autopsy 4. Aged 61. Prostatic gravel and arterio-sclerosis ; hydrocele.

Autopsy 5. Aged 66. Prostatic gravel ; double vaginal hydrocele, and aneurysm of aorta.

3. *Local Syphilis.*

Autopsy 6. Aged 28. Gummata of the heart, and both testes were fibroid, and there were hydroceles on both sides. In this case it is not meant that the syphilis was confined to the testes, but that the syphilitic infection of the testis was possibly the cause of the accompanying hydrocele.

4. *Inguinal Hernia.*

It may be assumed that a hernia may press upon the lymphatics that drain the tunica vaginalis, and thus lead to distension, and the two following cases are noted :—

Autopsy 7. Aged 57. Dead with bilateral inguinal hernia with non-adherent omentum in the left pouch, and on the left side there is a small vaginal hydrocele.

Autopsy 8. Aged 70. Right inguinal hernia with right hydrocele.

5. *Cancer of Rectum.*

Autopsy 9. Aged 74. Cancer of the rectum and acute peritonitis. Left hydrocele with clear fluid, and right hydrocele with turbid fluid.

6. *Cancer of Cæcum.*

Autopsy 10. Aged 38. Operation for appendicitis and acute peritonitis and cancer of cæcum was also found. There was a swelling of the testis, and this was thought to be due to a suppurating hydrocele. This was a very complicated case, and must not be regarded as unequivocal.

7. *Appendicitis.*

Autopsy 11. Aged 42. Operation of appendicectomy, and death. At autopsy, small left hydrocele.

8. *Cirrhosis of Liver.*

Autopsy 12. Aged 56. Cirrhosis of liver and chronic peritonitis. Left vaginal hydrocele.

Autopsy 13. Aged 41. Cirrhosis of liver, which was irregular and small. Death from broncho-pneumonia. There was also a bilateral inguinal hernia. Hydrocele large on the right side and a smaller one on the left side.

Autopsy 14. Aged 64. Cirrhosis of liver ; warts on the prepuce, and this was adherent. There were prostatic calculi. There was right fibrous epididymis and right hydrocele.

9. *Splenic Leukæmia.*

Autopsy 15. Aged 48. Phthisis and splenic leukæmia, with pleurisy and peritonitis, right hæmatocele, and the right testis was atrophied. There was a cyst in front of the left kidney which contained altered blood clot forming a swelling like the kidney in size and shape. There was also a small left hydrocele. The renal cortex was infiltrated with lymphoid cells.

10. *Purulent Meningitis.*

Autopsy 16. Aged 39. Death from purulent meningitis, small left hydrocele was found.

11. *Acute General Infection.*

Autopsy 17. Aged 1. Pneumonia and pleural effusion, and there was a right hydrocele, and the examiner raised the question as to a possible acute origin.

The following cases are reported from the Post-Mortem Room as showing reparative changes that may take place in a hydrocele cavity :—

1. *Adhesions between Layers of Tunical Vaginalis.*

Autopsy 18. Baby. Right hydrocele with adhesions.

Autopsy 19. Aged 50. Sarcoma of right testis, with adhesions in the right tunical vaginalis.

2. *Obliteration of Sac.*

Autopsy 20. Aged 54. Anæmia, scars of gastric ulcer, left tunica vaginalis was obliterated. Slight hypertrophy of both kidneys.

3. *Calcification of Sac-wall.*

Autopsy 21. Aged 59. The sac had a calcified wall, and contained creamy pultaceous matter, and, according to the examiner, may have been an old hæmatocele.

Autopsy 22. Aged 58. Cancer of gall bladder. Left testis wasted and the wall of the tunica vaginalis was thickened and partially calcified, and the sac contained a little fluid.

The following cases are very suggestive, and may be referred to later, but they will be noted now :—

Autopsy 23. Aged 9. Operation for radical cure of inguinal hernia, and all the structures of the cord were divided except the vas, and hæmorrhagic necrosis of the corresponding testicle occurred.

Autopsy 24. Aged 25. There was an operation scar of a slit prepuce. There was extreme atrophy of the left testis with pigmentation. The right testicle was compensatorily enlarged.

No attempt will be made as yet to try and explain any connection that there may be between possible causes and effects in the preceding cases, but we shall pass on at once to relate the clinical cases that have occurred, and that are noted.

CLINICAL CASES

These are classified according to the above method. The causes are sufficiently similar to allow of this method being repeated.

1. Acute local infection.
2. Local urinary sepsis :—
   - *a*. Phimosis.
   - *b*. Stricture urethræ.
   - *c*. Enlarged prostate.
   - *d*. Gonorrhœa.
   - *e*. Gleet.
   - *f*. Local infection of the bladder.
   - *g*. Growth of bladder.
   - *h*. Complicated cases.
3. Local syphilis.
4. Inguinal hernia.
5. Ill-fitting truss.
6. Following operation for hernia.
7. Rectal conditions.
8. Spermatocele.
9. Trauma.
10. Tubercle.
11. Trauma plus tubercle.
12. Influenza.
13. Enlarged liver.
14. Alcohol.
15. Gout.
16. Heart disease.
17. Tendency to serous effusion.

Two cases in which a hydrocele appeared to aid in the production of an inguinal hernia will also be recorded :—

1. *Acute Local Infection.*

Septic orchitis with a small hydrocele on the same side is common enough and occurs after traumatic and uncleanly instrumentation of the urethra, either for a stricture or for enlargement of the prostate. In these cases it would appear that the centre of the epididymis is first affected, though this is merely an impression gained by the writer. Gonorrhœa may be complicated with an epididymitis, and hydrocele, but this matter will receive attention later. It also occurs after an operation for enlargement of the prostate.

CASE 1, aged 68, occurred January, 1937, when an ordinary suprapubic prostatectomy was performed. The wound healed well, but the urine contained some pus, though not much. Five weeks after the operation, the wound being soundly healed, there was swelling and pain in the left testicle, and there was also a small hydrocele. This was cured in the usual way. To avoid this, the vas is often ligatured and divided on both sides, but, short of this, care should always be taken to support the scrotum and the testicles, and the patient should wear a suspensory bandage when he gets up. Such an orchitis and hydrocele may occur two or three months after the operation, and is probably due to sepsis at the neck of the bladder. I have no exact figures dealing with this matter, but I am glad to say that orchitis was not a common complication after prostatectomy done in the Genito-Urinary Department at Guy's Hospital.

2. *Local Urinary Sepsis.*

a. Phimosis.—CASE 2. Aged 45. Phimosis and hydrocele. Hydrocele tapped and then orchidectomy done some time after tapping, as well as a circumcision. Septicæmia followed, and the patient died. This case illustrates the point already made that the urethra should not be touched when there is sepsis about. Here a circumcision was performed at the same time as an orchidectomy. Sometimes under the prepuce, especially in old men, there is the foulest secretion that one can imagine.

CASES 3 and 4. Aged 22 and 32. In both cases phimosis was of such a nature as to call for circumcision, and this was done, and there is a note that hydroceles were also present and were treated adequately.

b. Stricture of the Urethra.—There is a good deal of sepsis about when there is a stricture of the urethra, and I have known a case in which a middle-aged man had been dilated in the department for stricture and then had ceased attendance for three years, and he told me that he had not been attending anywhere for this period. He came to Guy's Hospital as he had a perineal abscess. Also it must be remembered that many of the cases of perineal sepsis occur without the passage of an instrument, from which it may be justifiably assumed that sepsis is present in the urethra in

cases of stricture without any being introduced from without by an instrument.

This type of case occurs as an acute attack on chronic sepsis. Stricture is so common in the Out-Patient Department that one need not be surprised at the large number of patients that have both stricture and hydrocele. There are notes of thirteen cases :—

CASE 5. Aged 56. Old case of stricture and had been kept fully dilated at 18/22 French size, and recently the right testis had become swollen, and there was a hydrocele present. This case probably was due to actual local sepsis in the testis, but there was no sign of suppuration, and, in fact, the swelling of the testis was not painful or tender.

CASES 6 and 7. Aged 54 and 69. Both had hydroceles in connection with dilatation of a stricture which in both cases was very definite. In the former case there had been acute retention, and 1,500 c.c. were drawn off.

CASE 8. Aged 50. Here, though there was undoubtedly a stricture two inches from the meatus, the careless passage of an instrument led to an acute epididymitis, with the production of a hydrocele, but though the case is quoted here, it might well have been put in the category of Acute Local Infection, but it does show how important careful and aseptic catheterisation is in cases of urethral stricture.

CASE 9. Aged 73. There was a stricture five inches from the meatus, and this was impassable to the dresser. This may mean nothing at all serious, but it may indicate that the stricture really was tight, and had been present for some time. Dysuria began about a year before the patient was seen at Guy's, and a hydrocele appeared at the same time on the right side. Dysuria was evidently due to failure of the bladder muscle to overcome the stricture. The next point is that the hydrocele was so big that passage of the instrument was actually impeded by it. Acute inflammation developed, and this was cured by fomentations. Whilst the patient was in the hospital he had acute retention, but was treated for this and eventually discharged to an infirmary. As the patient had been wetting his bed for some time before admission, and as there was undoubtedly a stricture, of which there was no sign until the bladder had failed, it is fair to assume that sepsis having started it was not long before a hydrocele developed.

CASES 10 to 13. Notes simply stated that there was a hydrocele and stricture present together.

CASE 14. Aged 64. A stricture was felt, and there was a history of a hydrocele having been removed from probably the left testicle. The patient had pain in the left testicle, and an undoubted stricture, and was nervous about himself, though clinically there was nothing to be felt in the left testicle. Nor was there any hydrocele.

CASE 15. Aged 45. Had gonorrhœa three years before admission, and this was partially treated, but patient had to leave town. He developed a stricture, and later had an attack of retention. For this he was catheterised. He also had a hydrocele, developing before the retention. There was purulent discharge from the urethra, and there was also a direct hernia on the side of the hydrocele, *i.e.*, on right side. Here the case is complicated, and as a contributory cause of the hydrocele we must bring in gonorrhœa, gleet, hernia and a stricture. No gonococci were found, but other organisms such as streptococci were cultivated from the discharge. The case affords clear evidence of the septic nature of a stricture of the urethra.

CASE 16. Aged 50. Came first to Out-Patients with a hydrocele, and a stricture of the urethra was found as well. He was a patient at Guy's Hospital for eighteen years, coming first in 1915. He eventually developed a cystitis, but the fluid in the hydrocele always remained clear. He was tapped frequently. Later he developed a hernia, and this is interesting in connection with two other cases that will be recorded later, but it may now be said that a hydrocele may lead to the formation of a hernia.

CASE 17. Aged 73. In February, 1934, he was found to have a stricture, and this was dilated, but undoubtedly some damage seems to have been done to the urethra, and at the end of April, 1934, a hydrocele was mentioned, and this was so pronounced that he was admitted to the ward and there the hydrocele was tapped. It was situated on the left side.

Although sepsis may not be uncommon with a urethral stricture, I have an impression that it is not so common as with an enlarged prostate. In this connection we must recollect that an enlarged prostate may for many reasons lead to hæmorrhage, and sooner or later hæmorrhage leads to sepsis. Thus it is not surprising that cases of enlarged prostate are found with hydrocele.

c. Enlarged Prostate.—CASE 18. Aged 71. He had been treated since August, 1929, for retention and dysuria due to an enlarged prostate, and in November of the same year a hydrocele was noted for the first time. The urine was also infected.

CASE 19. Aged 65. Simply noted as a case of enlarged prostate with hydrocele.

CASE 20. Aged 94. He had been operated upon by me for an enlarged prostate, and I had done suprapubic prostatectomy, and had sewn up the bladder. He healed by primary union. The

operation was done at the age of eighty-six. He later developed a hydrocele, and was known to be alive in 1924.

CASE 21. Aged 68. Operated upon for suprapubic prostatectomy by Mr. Ogilvie in 1926. In 1927 I removed a stone from the bladder. He was seen later in 1930, and then had a foul glans penis under a long foreskin. Micturition was, however, quite free. There was also a hydrocele, and it was tapped. The right testis was hard.

CASE 22. Aged 62. Had evidence of enlarged prostate and had been operated upon, and also had a hydrocele tapped repeatedly.

CASE 23. Aged 72. There had been dysuria for four years, pointing to enlarged prostate. He had a hydrocele, and this had existed for three years, so clearly this case may be considered justly to follow upon the dysuria.

CASE 24. Aged 69. Cancer of prostate, and there was dribbling of urine. There was a history of hæmaturia definitely. There was a right hydrocele.

CASE 25. Aged 53. The urine was said to be normal. There was a hydrocele, and this was repeatedly tapped. Prostate was a little enlarged. Occasional pain in sacral region.

CASE 26. Aged 66. Had a slight purulent discharge from penis, and no bacteriological evidence of gonorrhœa. This discharge was associated with an enlarged prostate. There was probably a hydrocele, and the testicle on the same side was definitely large.

CASE 27. Aged 58. Enlarged prostate. Cloudy urine. Retention due to enlarged prostate. Right hydrocele. This was dealt with and a successful prostatectomy was performed later.

CASE 28. Aged 81. There was a large soft prostate, and the patient had urinary difficulties. He was catheterised. There was a left hydrocele.

CASE 29. Aged 60. This was one of the not uncommon cases in which an enlargement of the prostate may be missed. It was hard, and increased in transverse diameter, but not very prominent into the rectum. There was a very large hydrocele which was excised by Mr. Sutton with success.

CASE 30. Aged 64. This case is interesting in that a hydrocele seems to have been the first sign of something wrong with the prostate. The hydrocele was on the right side, and dysuria or other difficulties appeared in October, 1924, and it was in September (a month previous to this) that the hydrocele appeared first. This was tapped repeatedly. His circulation was so poor that Mr. V. E. Lloyd decided against any prostatectomy.

CASE 31. Aged 73. Enlarged prostate present, and the symptoms have existed for two years. Later the presence of a hydrocele was noted, after the urine was mentioned as being dark and foul-smelling.

(*To be continued.*)

Further Impressions—The Halstead Technique

By Ruscoe Clarke, Esq., F.R.C.S., Leverhulme Travelling Research Fellow

THE world can be divided into two types of people—those who read introductions and those who don't. I am an inveterate "introduction reader." I cannot pick up a textbook without starting at the beginning and trying to read it through. Frequently I do not get very far before turning to chapters of particular interest, but I generally manage to read all the "introductory" padding that most people "skip." This vicious habit has been particularly indulged in when I have come across new surgical textbooks. I have always solemnly waded through descriptions of how to sterilise instruments and prepare catgut. Until recently the principal advantage derived from this knowledge was that I did not have to rush around on the morning of my surgery *viva* trying to acquire this precious information. Essentially at Guy's we were satisfied with the way these things were done and with the materials employed. Instruments are sterilised by being put into sterilisers for standardised periods of time, catgut is used for buried sutures, salmon-gut clips for the skin. The gynæcologists, it is true, insist on silk for certain vital pelvic ligatures and for the ceremony of "tying the tubes," and the late Mr. Rowlands used thread for the skin, but these variations were believed to be more or less individualistic fads and of no particular significance.

I had always regarded catgut as a uniformly satisfactory material, particularly since it has been so conveniently put up in tubes. I had heard of the "tetanus" scares, but believed that danger to have been overcome by modern methods of preparation. I thought I knew the routine arguments on both sides of the "silk-*versus*-catgut" controversy, but believed that controversy to be one of those academic discussions that so delight the average examiner.

Except, then, for my "introduction reading," I was quite unprepared for the insistence on silk

which I was told was part of the "Halstead Technique."

I had heard of the Halstead operation for hernia; I knew that the chief surgical building at the Johns Hopkins Hospital was called Halstead House, and I must have been subconsciously aware that Halstead was the first to introduce the routine use of rubber gloves. I became aware of the existence of the "Technique" when I assisted at an operation for the first time at the Peter Bent Brigham Hospital, Boston. The "Technique" has been described as consisting in "taking an incredibly long time and using silk." Neither of these virtues appeared to me sufficiently desirable in themselves to form the basis of a "school of surgery." I was interested and decided to inquire further. As a result I can submit, as a foreigner here in the United States, my impressions of several aspects of this subject.

Firstly, who was Halstead? Secondly, what is the "Halstead Technique"? How did it come into being? What effect has it had on surgery generally, and lastly, is there any further benefit that can be derived from the study of the methods of this Master of Surgery?

William Stewart Halstead was born in New York on September 23rd, 1852. He entered Yale University in 1870 and graduated in 1874. He was captain of football and borrowed no books from the Yale library. In 1874 he entered the New York College of Physicians and Surgeons. In 1876, in spite of not having graduated from the College, he was successful in the competitive examination for admission to the Surgical Service of the Bellevue Hospital. In 1877, in the examination for the M.D. degree he was placed first. He then became house physician at the New York Hospital. In 1878 he went to Europe, where he studied under Billroth and Volkmann at Vienna and Leipzig. At that time the continental surgeons were far ahead of the English in their realisation of the value of the work that was being done by Lister in Scotland. In 1880 Halstead returned to New York and immediately began the first era of his career. MacCallum in his biography of Halstead states that "those who knew him at this time remember him chiefly as a bold, daring and original surgeon, an indefatigable worker and, most of all, an inspiring teacher." His teaching ability made a lasting impression on all who were privileged to be in his classes. He soon became attached to a large number of New York hospitals and began a number of experimental studies, many of which have had far-reaching effects. Of these the most significant from the point of view of the present theme, is his work on the development of the use of cocaine as a local anæsthetic.

In 1884 Koller announced in the Heidelberg Ophthalmic Conference that cocaine would anæsthetise the cornea. Soon after this Halstead and a number of his associates began to experiment, chiefly on themselves. Halstead himself seems to have made the discovery that the injection of cocaine into a nerve trunk produced "regional anæsthesia." The popularisation of local and regional anæsthesia must have played some part in the development of the deliberateness that came to be recognised later as one of the features of the Halstead Technique. Perhaps an even more important part was its effect on Halstead himself. As yet the dangers of cocaine were unrealised. Many of the earlier experimenters became addicts, and Halstead did not escape. This was for years kept quiet by his friends, but the fact is of importance in any attempt to study the influence of Halstead on surgery. When it became impossible for him to continue his activities in New York he was persuaded to go into hospital, and he did not return to New York.

After a number of periods of treatment lasting several years, during which he worked intermittently at Baltimore, Halstead eventually recovered. In 1889 the Johns Hopkins Hospital was opened and Halstead was made associate Professor of Surgery. This may be regarded as the start of the second half of his surgical career. It was from the Johns Hopkins that the Halstead school of surgery was derived, and it is of interest to realise the change in Halstead himself which resulted from his illness. This change must surely be regarded as an important factor in the development of the technique which he and his assistants practised. The change in Halstead is well described by MacCallum: "While in New York he was a powerful, restless and tireless worker spending himself physically and mentally in endless operations, controlling services in several hospitals, teaching day and night and at the same time serving an increasing private practice. After his illness he came back to a far more thoughtful, leisurely life, with time for reflection and contemplation of his surgical problems, a life in the end far more fruitful than would ever have been the strenuous rush of his existence in New York if he had kept on at the same pace. In his case it was probably no misfortune, but rather the reverse."

This is no place for more detailed biographical details, except to say that Halstead broadcast his methods, not so much through the media of his numerous important writings, as by the training of a number of assistants who left Baltimore to spread through at least the Eastern part of the States, the influence of their master and his additions to the

practice of operative surgery. Many of these men are in themselves not remembered for their particular work. Two, in separate fields, have become recognised throughout the world as masters of their particular fields of surgery—Harvey Cushing and Hugh Hampton Young. If Halstead was responsible for nothing beyond his influence on these two men his work must be of universal interest. It is impossible to discover now how much Harvey Cushing owed to the influence of Halstead. He was Halstead's Resident, but was always rather independent. To me, however, this aspect is of especial importance because it is through the present existence of Cushing's influence at the Brigham Hospital that I became aware of the fact that the use of silk was anything beyond a fad.

The technique, however, must be considered as being representative of much more than an expression of the personality and ideas of an individual. Like so many advances in surgery, ideas originate frequently from different individuals at the same time. One or other may claim or be credited with the honour of making a discovery, but it is medicine as a whole that is really responsible for its own advance. The Halstead influence must be regarded as a reaction against the "brilliance," "daring" and "speed" that were the immediate result of the widespread introduction of anæsthesia and antisepsis. Operations could be done painlessly, the patient could not feel, and was therefore forgotten. The surgeon spread his activities anatomically, new regions were invaded, new operations were performed, and the mortality was not prohibitive. Ultimate results were not always perfect. The revolt of Halstead at Baltimore was as much as anything a revolt against the Halstead of New York. However successful his own operations, the teaching by so brilliant an operator must have resulted in others less brilliant trying to follow. In his more reflective moods he followed up the conclusions of much of his earlier experimental work and became more and more insistent on respect for the tissues, exact hæmostasis, accurate approximation by suture of cut tissues and the use of silk. These precautions in themselves involve the expenditure of time and are probably largely responsible for the impression of slowness that has been attributed to Halstead and his followers.

On careful investigation it appears that the use of silk is more significant than would at first appear. The ordinary argument for and against the use of silk for buried sutures is based on two principal facts—the difficulty involved in sterilising catgut and the fact that silk is and remains a foreign body. The real comparison between the two suture materials is much more complex. Assuming provisionally that catgut can be sterilised easily and reliably and that sepsis can be excluded so that silk does not have to be discharged before healing takes place, what then are the relative merits of the two substances? Perhaps the principal difference, not always made clear by the protagonists of silk, is that the silk popularised by Halstead is much finer that the "braided" silk we sometimes see used at Guy's. At the same time it is very much stronger than any comparable thickness of catgut. Finer ligatures and sutures can be used so that the actual amount of "foreign material" left in the wound is reduced to an absolute minimum. This reduction to a minimum involves the careful cutting of all ends of the ligatures very short. This can be done with silk when it cannot be done with catgut, since knots in catgut can easily slip if ends are cut too short. Silk sutures if tied too tightly will cut through the tissues. They therefore must be tied carefully. A catgut suture that will not cut through immediately may cut out later if the surrounding inflammatory reaction, due to the absorption, weakens the tissue in the immediate neighbourhood of the suture. Silk cannot be tied in the same way as catgut. It is possible to cut or fray a ligature by careless tying. Once tied, however, the silk knot is much more likely to remain tied for a length of time. There are, then, a number of points actually to do with the technical manipulation of this silk that require a deliberate method of operating that is not so obviously desirable with catgut. It has been said that the bad surgeon cannot use silk; the good surgeon can use either, but in most situations will prefer silk. Even in the absence of obvious sepsis catgut, sooner or later, is absorbed. Absorption is the result of a process of liquefactive necrosis which involves a variable amount of surrounding tissue. This is the end result of an inflammatory reaction excited presumably by some irritant attribute of the catgut. Particularly in the presence of a few mildly virulent organisms this reaction may be more severe and result in a slight spread of tissue destruction which may interfere with subsequent healing. In the absence of infection silk is practically inert and provokes no such inflammatory reaction and therefore should result in quicker, better healing. Given, then, easily sterilisable catgut and a clean wound containing only the minimum of contaminating organisms that every "clean" wound has in it, silk has two theoretical advantages: (*a*) the surgeon has to be careful in his treatment of the tissues; (*b*) wounds heal better. The significance of the former depends obviously on the individual surgeon. The lesson of gentleness does not

depend essentially on the attempted use of silk. As far as the latter is concerned results alone can tell. I have listened to this argument now several times and myself argued both ways. The principal claim made for catgut is that it "works well enough." The obvious reply to that is to try silk and see if it does not work better. My personal experience is very limited, but I have seen a number of renal wounds at the Follow-up Clinic at the Peter Bent Brigham and have had considerable difficulty in seeing which loin had been operated on. The results are more obvious in certain specialised fields which I will indicate later.

It can be seen how easily the use of silk came to be regarded as representative of this particular school. Apart from the material itself its use involved the elaborate care and gentleness which, of course, characterised other surgeons who did not stress the use of any particular suture material. The reaction towards deliberateness in surgery can be traced elsewhere, and is in no way to be attributed even in America to the Halstead school alone. The Finisterer technique for gastric resection involved essentially similar methods without the use of silk instead of catgut. Other branches of surgery found the need for care in hæmostasis and evolved the deliberate operative method in various parts of the world, so that the total effect of Halstead himself is impossible to assess. Where, however, work was done by, and methods elaborated by, his assistants, no one can begrudge some of the credit to their teacher.

Harvey Cushing was his Resident in 1898, his Associate and Associate Professor for some fourteen years after that. His brilliant experimental mind appealed to Halstead, and it was Halstead who urged Cushing to embark on his career in neurological surgery. The relationship between these two men seems to have been very much that of contemporaries. Cushing left Baltimore to go to Harvard, where he created the Surgical Service of the Peter Bent Brigham Hospital and continued his brilliant clinical and laboratory neurological work.

The existing technique at the Brigham is essentially based on what Cushing taught. The methods are to a large extent similar to those advocated by Halstead. It may be that the similarity would have existed without the association of the two men. Cushing found that a policy of extreme deliberation involving careful hæmostasis and gentle handling of the brain was the only way to obtain results in brain surgery. The time taken necessitated the use of local anæsthesia. Operations frequently lasted all day, with an interval for lunch. Cushing has been known to take a brief rest while an assistant continued the slow deliberate isolation of a brain tumour. The methods elaborated by Cushing are now almost universally practised by neurological surgeons on both sides of the Atlantic.

Hugh Young was the second of Halstead residents to take up a special branch of surgery. Whilst much of his original work in urology cannot be particularly related to the Halstead influence, one aspect of his work must certainly be to some extent the result of a thorough knowledge of the possible refinement of surgery. I refer particularly to his plastic work on the urethra in epispadias, hypospadias and hermaphroditism. This work has always been hampered by the potential or almost inevitable septic condition of the field. Disappointments are frequent, wounds break down, scars complicate the original abnormality, sinuses persist, and the end results are frequently no better than the original state. Young not only invented a large number of plastic operations, but carried them out with the necessary technical skill to produce many astounding results. It is frequently forgotten that, in spite of the irritation of urine, such wounds can heal by first intention providing that the other factors which tend to produce sepsis are reduced to a minimum.

The respect in which plastic surgery, as a whole, is at present held is due to the use of methods essentially similar to the Halstead methods. The same careful hæmostasis, the same careful handling, the insistence on flawless asepsis, and the accurate suture with fine needles and fine suture materials are accepted as essential accessories to good plastic work. The advantage of silk over fine silkworm gut or thread for removable sutures has not been a point of contention in this field. The fineness is more important than the material, and for plastic work tension is usually avoided where possible so that the strength is of less importance. These methods cannot be attributed to the Halstead influence, but show how similar advances can occur independently as part of a general trend in medicine or surgery.

Halstead did a large amount of careful work on hernia. His operation is not essentially different from the Bassini operation that has been the underlying basis for most of the operations on hernia performed at Guy's in recent years. It is frequently forgotten that, in spite of the term "hernioplasty" used by Mr. Philip Turner for his own operation, any operation for the repair of hernia is essentially a plastic operation on the abdominal wall. Operations are often blamed for bad results when it has been the technique of the operator that has been at fault. Halstead's results were consistently better than those of any but his

trained assistants. Again the insistence on careful hæmostasis, avoidance of dead spaces for hæmatomata to collect in, and accurate suture with the minimum of tension, all part of this deliberate technique, gave better results than the more rapid procedures of others.

This influence then is of interest, first, as showing the far-reaching effect of an individual personality, and secondly, as part of a general trend towards more careful, gentler surgery. Even now there are many surgeons practising gentleness in surgery, but very few who stress it in their teaching. There are many who must still be considered as belonging to the " pre-Halstead " age. Speed is still worshipped as an attainment in surgery, and devotion to detail often criticised as being unnecessary. It is interesting to note that it has been in some of the more difficult and highly specialised branches of surgery that the most care has been devoted to detail. Surely this same care devoted to " ordinary " surgery will produce better results. We are frequently too satisfied with accepted standards as applied to such matters as the time of post-operative incapacity. Frequently the difference between six weeks and three months is of tremendous importance to the economic life of the patient. Careful technique even without reducing mortality may improve the less obvious aspects of recovery out of all recognition. With modern anæsthesia and modern technique it frequently happens that while a patient may be offered a choice between medicine and surgery, the latter may be not only less unpleasant but less time consuming—even if the operation itself does take " an incredibly long time."

REFERENCE

" William Stewart Halstead " by W. G. MacCallum. Oxford University Press, London, 1930.

Correspondence

Women Medical Students

To the Editor of the GAZETTE

SIR,—Your " Passim " of April 10th has brought upon you the obloquy which usually follows a frank expression of opinion. Professor Ryle labels you conservative, and prides himself upon his liberal outlook. I gained the impression that he employs these terms in their political rather than in their strict etymological sense. It is misleading to employ political nicknames in a too literal sense. When our forefathers divided the parties into Tories and Whigs they did not seriously imply that their adherents or opponents were either Irish footpads or Scottish brigands.

The opponents of the Conservative Party have ever applied to the word the meaning of a steadfast determination to resist all change. To the word " Liberal " the same lexicographers have given the meaning of a benevolent interest and desire to better the condition of their fellows. Yet history affords scant support to such interpretations of popular nicknames. Peel, the first Premier to be called Conservative, repealed the Corn Laws. Disraeli, in 1867, was the first to extend the franchise to the working classes. Beaconsfield and Cross proved themselves the most enlightened social reformers of the nineteenth century. Balfour passed the Education Act. A coalition government, with a strong Conservative majority, gave votes to women and Baldwin enfranchised the flappers. The great Liberal statesmen of the nineteenth century devoted much of their ability and energy to the opposition of Factory Acts designed to improve working class conditions, lest the abolition of sweated and child labour should lessen the profits of the large manufacturer. In the rest of their time they propagated the theories of Little England, universal peace and a country disarmed. The Liberal is ever doctrinaire.

I hope, Sir, you will not regard the foregoing as wordy irrelevance. Rather may it increase in you the pride of being worthy of Professor Ryle's taunt of " conservative."

None can doubt Professor Ryle's devotion to Guy's, nor the lustre he has added to her name. But the reputation of Guy's depends more upon her average old Guy's man than upon the fame of the few who achieve the heights scaled by Professor Ryle. That the reputation of Guy's is the highest is due to the combined influence of the average. That her reputation is the highest is proof that little has been amiss with the educational system at Guy's.

I have had the privilege of meeting a considerable number of medical women. Their abilities and devotion to their profession have, only too often, increased my consciousness of my own defects. But I deny that the undoubted ability of many medical women constitutes a logical argument in support of the co-education of male and female medical students. Mr. Chapple's paper, quoted by Dr. Garland, may bring home to us our lack of knowledge of the problems of sex. The fact remains that there is a marked difference in the thought processes and reactions of the mass of men and women. I aver that the ordinary,

natural man learns that a different method of approach is necessary to men and to women.

I have had some experience of a provincial mixed medical school. I formed the opinion that the teaching did not approach to that at Guy's; nor was the spirit of the students of either sex so happy.

In spite of his difficulty in persuading Cambridge men to continue their training at Guy's, I venture to doubt if Professor Ryle really considers the training given at the provincial and continental medical schools to which he refers superior to that at Guy's. Throughout life one is faced with the compromise between the ideal and the expedient. Only in the direst necessity should we be forced to adopt that which is expedient before that which is ideal. That provincial and continental, or even two London, medical schools find it expedient to admit women students on equal terms with men is a poor argument to support the suggestion that Guy's should adopt the unfamiliar rôle of follower rather than that of leader. I cannot doubt that Professor Ryle believes that Guy's is better than provincial and continental medical schools.

Sir, you have well pointed out that two London medical schools whose fame is undoubted and which even Guy's men are proud to acknowledge as equals have, after painful experiment, decided that the co-education of men and women students is not a success. Guy's should be grateful for this experiment, and should be doubly grateful that, in spite of doctrinaires, it had not to be carried out under the shadow of Thomas Guy.

Yours, etc.,

HENRY RICHARDS.

Khartoum, Sudan.

To the Editor of the GAZETTE

SIR,—Despite the considerable correspondence which the suggested entry of women into the Medical School has aroused, I cannot help feeling that the real objection to this project has yet to be raised.

It is agreed that there are already so many students here that the entry of six more, whether they be male, female, or neuter, is to be deplored; also that full artistic expression, as exemplified by the carvings in the Externs' Room and the language in the Dressers' Room, might be cramped by a feminine invasion. Yet the basic reason for their continued exclusion is not that they restrain, but that they inspire. One might almost say they arouse.

Women are, in fact, a disturbing element. This is particularly so in a male community when there is work to be done. I am neither so foolhardy nor so unintelligent as to maintain that women should not train as doctors. But if women and men associate together in their training their concentrative ability will suffer; the pursed lips and rapt brows, indicative of enthusiastic attention, which mark the features of students on rounds to-day, will be replaced by nudges, winks, arch looks and facetious undertones.

There may even be giggles.

At lectures, minds which ought to be occupied with the problems expounded by the lecturer will be a prey to such profitless and distracting speculations as, "Who is sitting next to Audrey?" or "Why didn't Joan even look at me when she handed me the list?"

This profligate waste of instruction is, I think, a stronger objection to mixed lectures than any embarrassment at their subject.

After all, men who blench when elephantine copulation is mentioned at a mixed lecture would presumably swoon at a sherry party where the topic differs only in the substitution of personalities for elephants. Medicine is so very much bigger than pornography.

Finally, what about the nurses? Apart from a completely false analogy which has been drawn between them and the proposed female students to support a contention that the latter would not upset the workings of the Hospital, nurses have not even been mentioned in previous arguments. Yet this change would affect the nurses considerably. When there are male and female students in the wards together hostility between the nurses and the "hen medics," as these women are ingloriously called in America, is inevitable.

The excellent relations at present existent between nurses and students due mainly to the consistently helpful dispositions of the former is yet another advantage which would be horribly jeopardised. This is not merely a psychological truism—it is an established fact at other less wholeheartedly masculine hospitals.

Let none imagine these to be the opinions of a misogynist. Nothing could be less true. My opinion of the female sex, both generally and particularly, is quite absurdly high.

It is because feminine society is so vitally essential to the normal young man that it is unfair to cram his work with opportunities for its cultivation at the expense of his medical education. To do this is to invite disaster—what Noel Coward described as "the triumphant, inevitable defeat of mind by matter."

Thus to complicate the travail of its students in their struggles for knowledge has never yet been the way at Guy's. May it never be.

Yours, etc.,

D. STAFFORD-CLARK.

To the Editor of the GAZETTE

SIR,—After the preceding correspondence on the above subject I was relieved to read Dr. Beddard's sane letter in your issue of 8th May, 1937. I have had experience of women medical students as fellow students during the pre-Clinical part of my medical course. I have done a house appointment with a woman as my junior house surgeon; I have taught practical midwifery to women students, and, lastly, I practise in a town in which I have several women doctors as my colleagues. Like Dr. Beddard, the difference between the male and female student and practitioner is only too obvious to me.

Guy's prides herself, or used to, on turning out a really good, common-sense general practitioner, and I can think of many occasions when, in the course of general practice, it is probable that a man who, as a student, might have been classed by Professor Ryle as " poor calibre," would be of greater utility to the community than many of Girton's brilliant young ladies.

There used to be something which could not be defined about Guy's. By some it was called the spirit. I hope it is still present, and, if so, I think that the admission of women to Guy's would have an undesirable influence on the institution.

Lastly, I hope the Hospital will soon rise to her former heights on the football field. We won't get any forwards from Girton.

I regret having to sign myself,

Yours, etc.,

PRACTITIONER.

Tumours and Swellings of the Hand

To the Editor of the GAZETTE

SIR,—In a footnote to my article in the last issue of the *Gazette* (p. 199) I attributed to Knaggs an article on Cutaneous Melanoma. This was an error for the article was written by Pringle (*Lancet* 1937, i, 508).

Yours, etc.,

N. ECKHOFF.

20, Harley Street,
W.1.

Physical Signs in Empyema

To the Editor of the GAZETTE

SIR,—Dr. Maurice Shaw replies to my letter in your issue of April 10th in such a friendly spirit that I know he will welcome criticism of his views from me. I admit freely the size of the child's lung should be taken into account, but my main argument was that the consistency of the child's lung is of far greater importance than usually accredited. Diffusion and reflection are, in Dr. Shaw's opinion, the principal agents in modifying the conduction of the sounds from larynx to chest wall. He omits absorption, which is equally important, and unless this is also taken into account the physical signs will never be explained correctly.

I stated in my previous letter that the child's lung collapsed almost completely. This means that the sounds which originate in the larynx are conducted first through the bronchi and then through collapsed lung. In both these media there is little absorption, nor is there in the fluid or chest wall, because the density and elasticity of the tissues (*i.e.*, collapsed lung, fluid and chest wall) is approximately the same. In the adult lung, only partial collapse takes place, and there are therefore a series of air-containing spaces between the bronchi and the fluid. These absorb practically all the sound which fails to cross the highly absorptive space formed. The normally expanded lung absorbs a considerable amount of sound, but not all, because the tissue is elastic and on tension. Removal of this tension in spongy collapsed lung means the sound is conducted very badly. I must admit freely that these thoughts took me back to my 1st M.B., and this lead me to elicit the help of one of my colleagues who teaches the subject of sound for the physics part of that examination, and I am indebted to him for help.

Returning to the clinical side, I agree with Dr. Shaw that all children with effusion do not have bronchial breathing. I believe, however, that the underlying lung is badly collapsed and not usually in the syn-pneumonic stage. The last three cases of pleural effusions in young children I have seen have all had bronchial breathing, and all of these were undoubtedly tuberculous. It is true that precipitate operation is more perilous than delayed diagnosis, but delay may be too long, and I hope I am right in saying no student leaves Guy's now without realising the full significance of the terms syn- and meta-pneumonic empyemata, which were coined in the Children's Department by Dr. Cameron and Dr. Osman.

Yours, etc.,

3, Horton Crescent,
Rugby.

R. E. SMITH.

Oh, Dear!

To the Editor of the GAZETTE

SIR,—I have often wondered why it is that almost throughout the Hospital patients are addressed by the nursing staff as " dear." Everyone knows the difficulty of finding a suitable title, and admittedly " Dad," " Mister," " Mrs.,"

" Sonny," " Jimmy," etc., are far from ideal, but I always feel the inevitable " Dear " which is attached to any remark made by a nurse to a patient, must become exceedingly irritating after a short time, and would remind me of several maiden aunts whom, more especially in illness, I would rather forget.

Now do not think me harshly critical, Mr. Editor. I know that the nurses are always generous and kindly folk, but it does seem that their imagination is often inversely proportional to their seniority, and often this " dear " complex threatens to become almost ludicrous about the time when, like foxes in the summer time, they change their colour and become Sisters. Sisters, then, are watched and imitated by countless nurses, and so the habit spreads until it becomes as firmly inculcated as it is to-day, and nothing short of an earthquake would alter it.

However, Mr. Editor, I do feel that relatives and friends, not to mention the patients themselves, would be glad to hear the occupants of the various beds referred to as Mr. or Mrs. So-and-So, according to their name, rather than the inevitable and somewhat Presbyterian " Dear," and would be glad if you would use your influence towards bringing about such a change.

Yours, etc.,

DEARIE.

Reviews

The Operations of Surgery. By R. P. ROWLANDS and PHILIP TURNER. Published by Messrs. J. & A. Churchill. Pp. 998. *Price* 36*s*.

THE eighth edition of this famous book has had its usual cordial reception in the medical press. One reviewer alone tempered his approval with the lament that the work has radically changed in character. The *Lancet* regretted the division of authorship among several writers in a work whose most striking character had been its strongly individual flavour. Thus it had been created by Jacobson and continued by Rowlands and Turner. Its readers sought it for an authoritative and balanced opinion on any surgical procedure. They had reliance upon its judgment in departments of surgery with which they were unfamiliar, because they knew that that opinion was sound in other fields. It was not a catalogue of the operations of surgery, as its name might imply, but rather a compilation of those procedures favoured by the author, together with reasons for the preference. A constant proportion of clinical material, the clear fruit of mature experience, was included. The production had a uniform quality which is denied collaborations. Throughout the English-speaking world surgeons had learnt by experience that they could trust the choice of procedure recommended in the book, and, of particular importance, that over the whole field of surgery there was here expressed the views of a general surgeon.

The rapid and very vocal growth of the many special branches of surgery make it doubtful whether any such general survey from one pen is longer possible ; and in this edition a general surgeon and three specialists have collaborated. But it is this very profusion of specialist literature to-day that would more than ever render valuable a complete survey and assessment by a general surgeon. Only in the largest centres is the degree of specialisation possible for which the literature caters. Outside these centres the work must be done by general surgeons. It is to these who perform the bulk of the world's surgery that a work such as Rowlands and Turner is of supreme value. In regularly recurring editions proven advances can be disseminated and consolidated, and a check imposed against the too-ready acceptance of measures still awaiting full trial.

Be that as it may, the eighth edition is a collaboration and Mr. Turner has indeed been lucky in those whom he has asked to assist him in its production. Part—the sections on peritonitis, the stomach and duodenum, visceroptosis, chronic constipation, and operations on the intestine—had already been written by Mr. Rowlands before his death. Mr. Ogilvie contributes on spleen, pancreas, hernia and rectum ; Mr. Thompson on genito-urinary operations, and Mr. Gibberd on gynæcology.

In the sections devoted to abdominal operations proper a most admirable balance is struck between the clinical and operative descriptions. The profuse illustrations which supplement the lucid text are models of what textbook diagrams should be. It was a disappointment to find that Mr. Ogilvie has not contributed the chapter on the stomach and duodenum. The spirited correspondence that enlivened the medical press of eighteen months ago, and the considerable body of literature since, on peptic ulcer and its complications, await assessment, and we had looked forward to such a review from his pen. To a reviewer an omission is often more obvious than a positive virtue. In these chapters on abdominal surgery it is the

comprehensive nature of the contents and the attention to detail that strike the reader. Every aspect of an operative procedure is discussed, and, in this type of work, necessarily. If in the current press reiterations of the perils of excess purgation sound too trite for tears, they do not here, when considered along other essentials in the care of the patient.

In dealing with growths of the large bowel, Mr. Ogilvie stresses the modern preference for multiple stage operations, and we were gratified to see reproduced in the chapter on rectal carcinomata Miles' diagram of the lymphatic spread which demonstrates the possibility of lateral deposits.

It is refreshing in a modern British textbook to find an unbiased attempt at assessment of the value of fixing operations on the kidney. This procedure has suffered too much in the general decline of abdominal pexies. Insufficient attention has been paid the results of Kelly and his followers in America by the use of nephropexy in selected cases of hydronephrosis and renal pain. Mr. Thompson is at his best in the description of such operations. A résumé of the routine investigation to which urological cases are submitted is included, and we take this opportunity to express regret that the phenolsulphonaphthalein test of renal function was not described. In ease of performance and convenience it far exceeds the urea clearance test; in both these assets, and in reliability, it excels the urea concentration test. By its use in the surgical wards we would conform with the leading urological clinics on both sides of the Atlantic, and thus facilitate comparison of our cases with those reported in the literature.

In the final chapter on " Some Recent Developments " is condensed in fifty pages a mine of information. It includes a résumé on chest surgery by Mr. R. C. Brock, an account of gastrectomy under local anæsthesia by Mr. Ogilvie, and forms an admirable concluding chapter of considerable value to the examinee wishing to acquaint himself rapidly with the best of recent changes.

Messrs. Churchill publish the book and it is beautifully produced.

P. C.

Sport

Rugby

SEASON 1936-37

JUNIOR XV's

DURING the past season the Junior XV's were reconstructed, which resulted in combining the Ex. A and B fifteens to make two Ex. A's, and the Ex. B and C fifteens to make two Ex. B's. The A fifteen were not disturbed, and will remain constituted as hitherto. The Wanderers will continue as a separate side.

The writer understands that the intention is to use the Ex. A as a " nursery " side, into which all promising material will be drafted. How this scheme will eventually work remains to be seen, but great hopes are placed in finding talent, with a view to promotion to the senior sides. Many first-class sides have a similar plan, but usually one finds two A fifteens, one Ex. A and two B fifteens. In this scheme, the 1st XV can draw on about thirty players in the two A's, and still use the Ex. A as a nursery side into which promising material is drafted.

Also a very important change has been made in the appointment of an Honorary Match Secretary to arrange fixtures for all the junior fifteens. Hitherto this was part of the duties of the various team secretaries. This centralisation should enable the team secretaries and captains to concentrate entirely on their respective sides, and, as far as possible, keep them keen.

The past season has been full of fluctuations in the fortunes of the sides, but it is interesting to note that several players who started in the junior fifteens finished the season in the 1st XV.

The A fifteen had a fairly successful season. They started well, but fell away slightly before Christmas, mainly owing to loss of players through exams. and holidays. The personnel of the team changed considerably, and over thirty people were called upon at different times. The team was also most unfortunate in having many injuries at the end of the season. After beating Bart.'s in the Junior Hospitals' Cup they went under very surprisingly to Middlesex by 12 points to 10 in the Semi-Final. However, next season promises to be a good one for the A.

The Ex. A started the winter term with great gusto and showed much enthusiasm in winning several matches by good margins, and, with one exception, losing the others by the odd point. Towards the end of the term results were not so good, and the team suffered by the call of examinations. At the beginning of the spring term great things were expected from the new system of team selection, but, owing to inclement weather, five matches in succession were cancelled. Out of fifteen fixtures only four matches were played, so that when the weather improved towards the end of the term it was difficult to raise a side or to find any enthusiasm. Having discovered some really useful men amongst recent recruits, the

outlook for next season is particularly promising.

The B fifteen, which will be known in future as Ex. A II, had only a moderately successful season. Starting with a convincing run of successes, they lapsed badly towards Christmas, when they lost their full-back and several forwards to the A fifteen, and the team were slow in settling down again after Christmas owing to cancelled matches due to waterlogged grounds. The forwards, among whom were several newcomers, lacked a regular leader, but, as individuals, played valiantly on the muddy pitches of January and February. The halves combined well, and the three-quarters made good use of their opportunities, although their defence was not always good. Co-operation with the Ex. A after Christmas brought considerable benefit, especially in the distribution of new talent.

The Ex. B fifteen, or, as it came to be known after the general promotion, Stafford-Clark's B fifteen, enjoyed a series of almost unprecedented triumphs. Worthy of special note are such encounters as the first match of the season, when the team were defeated by only nine points to eight by London Old Dovorians, who subsequently drew 3—3 with Westminster Hospital 1st XV; the victory over the Old Brightonians' B fifteen by 61 points to nil, and against Keble College, Oxford, when the Guy's team won by one point after Bulstrode had kicked a penalty goal out of the Slough of Despond and mud that was the second ground at Honor Oak Park.

In addition to their athletic achievements, the boys were responsible for two new songs composed by a versatile member. They also had several extremely enjoyable train journeys, and provided out of their limitless resources three men who, at one time or another, played for the 1st XV and four for the A fifteen, while the "Nomads" XV who routed the Essex County Technical College by 36 points to 6 contained no less than nine regular members of the old Extra B. With such keenness as was shown during the past season the side is looking forward to next season with much enthusiasm.

The C fifteen once again showed very satisfactory results for their twenty-three matches. Without anyone outstanding, the fifteen, and more especially the forwards, developed and improved until the whole team work reached a high standard. The outsides suffered owing to injuries and consequent position changes, and could not always do themselves justice. Although there were many close and enjoyable games, there were still several one-sided matches, which will, however, diminish now that the making of fixtures and individual promotion has become more centralised. This was started half-way through the season, with eagerly anticipated success. It is interesting to note that during the past three seasons the C fifteen have scored exactly 1,000 points. On the whole the team showed a high degree of enthusiasm and keenness.

The Wanderers XV have had a season somewhat marred by injuries, losing their full-back early in the season, and several other players being absent for varying periods. This, together with the fact that five consecutive matches were scratched owing to influenza or flooded pitches, prevented the team from settling down. The forwards had an excellent leader, but lacked weight in the tight. The halves were efficient and resourceful, although inclined to slowness off the mark. The three-quarters all showed plenty of scoring power, and when given room to develop their movements they were dangerous. With a few more fast, heavy forwards there will be a great improvement in the team, and next season's strong fixture list should prove most enjoyable.

SUMMARY OF RESULTS

	P.	W.	L.	D.	Points F.	A.
A XV	28	15	12	1	312	256
Ex. A XV	19	7	10	2	193	167
B XV (now Ex. A II)	25	12	13	1	305	221
Ex. B XV	19	14	5	0	319	121
C XV (now Ex. B II)	23	14	8	1	317	135
Wanderers	14	5	8	1	73	164

Hospital Information, etc.

Papers by Guy's Men

W. E. Herbert. Results of root resection. *Dental Record*, 1937, lvii, 250.

Ronald E. Smith. Influenza in adolescents. *Clin. Jour.*, 1937, lxvi, 197.

R. S. Bruce Pearson. Observations on skin sensitivity in asthmatic and control subjects. *Quart. J. Med.*, 1937, vi, n.s., 165.

L. J. Witts and Others. Achlorhydria, anæmia and subacute combined degeneration in pituitary and gonadal insufficiency. *Ibid.*, 195.

Marriage

COBB—STEDMAN.—At Ruiru, Kenya, on May 1st, 1937, Charles Charrington, son of the late Charles Munro Cobb and Mrs. Pennington and stepson of Dr. Drury Pennington, of London, W.1, to Doris Lilian, youngest daughter of Mr. and Mrs. W. R. Stedman, of Hastings.

Births

SCHOFIELD.—On April 14th, 1937, to Dr. and Mrs. J. Barlow Schofield, of Derby—a son.

ROBERTSON.—On May 13th, 1937, to Eirwen (née Nicholas), wife of Dr. J. Murray Robertson, of 30, Upton Road, Watford—a daughter.

Death

TURNER.—On April 15th, 1937, at Newgate, B.C., Canada, Harry Philip Stanley, eldest son of Wing-Commander H. M. Stanley Turner, M.D., F.R.C.S., Edin., R.A.F. (retired). Buried at Rooseville, B.C.

EDS. {A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

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PASSIM

MUCH has happened in this world since last we wrote. The Busmen's Holiday is over, Midday Sun has won the Derby and the bookmakers have our shirt—for which, fortunately, we have had little use lately, as the treacherous month of May ended with a welcome wave of heat. Our late Sovereign and President of this Hospital, His Royal Highness the Duke of Windsor, has been married quietly in France; someone has flown to the Cape and started back again; whilst in the molten mass that once was Spain, dark-skinned warriors from further south run hand-in-hand with the free-willed Nazis, both pawns in the game of a bold man's bluff.

However, here at Guy's we have had little to disturb us. All sunburned men are slightly handsome, and the Theatre balcony has been popular with those who want to roast, while others, tired of tanning, have been grateful for a loan of the Nurses' Swimming Bath. In the Park, now perhaps at its best, students have wiled away many an hour in blissful coma, some deriving an occasional opiate from a brief glance at one textbook or another, but, for the most part, quite untroubled by thoughts of work.

In short, we have had a fortnight of peace, and not one single person has suggested sending their daughter here as a student.

DR. R. L. WATERFIELD, as most people know, has managed to attain to an equal brilliance in two scientific fields—medicine and astronomy. He has often been heard "on the air" in his capacity as an astronomer. Last week he created what must undoubtedly be two all-time records, for which we offer our congratulations. He was the first Guy's man and the first astronomer ever to televise. Indeed, he may even have been the first medical man, thus attaining the triple crown, but we have been unable to check this last point.

SOME time ago we were alarmed by the sudden disappearance of one of the Children's physicians. Dr. Ellis seemed to have vanished in the night, and the rumour-spreaders had a gala day. Some said that he had gone on holiday, others that he was tired of the bit of old Bright that he has had to use as a ward, but the wags who said that he had 'just gone to Spain for the shooting' were nearer to the mark than many.

In reality, Dr. Ellis left for Bilbao to help with the evacuation of some four thousand children from that unfortunate town and stayed there for about ten days, during which he saw many strange and terrifying sights.

In spite of efforts at non-intervention and promises of protection from neutral Powers, such an expedition calls for considerable personal courage, and we feel sure that our readers will join with us in our gratitude for Dr. Ellis's safe return, and our congratulation upon the satisfactory completion of such a difficult and dangerous task.

Elsewhere in this number we publish Dr. Ellis's most interesting account of his experiences during this trip, for which we are very grateful, since we know that the author has been in great demand lately, and that he very generously found time to write this article especially for the *Gazette*.

IN our last issue we made mention of the unfortunate fate of a licence which was intended to prolong the drinking hours in the College on Coronation Day, and directed some criticism towards the Catering Company.

In the succeeding paragraph, which we would withdraw, our references to the mismanagement of the company were apparently founded on inaccurate information. We had no intention of casting aspersions on the Board of Directors or the Secretary of the company, and desire to offer them our apologies.

▭

AFTER the Coronation, we congratulated, in these columns, several Guy's men who had appeared in the Coronation Honours List, but much regret that we omitted to mention that Sir John Atkins had been made a Knight Commander of the Victorian Order. We apologise for this grave error, and hasten to congratulate Sir John upon his great distinction.

▭

BY that curious cake-walk that leads through the hissing laundry and the heat of the Hospital underworld to the squash court, there is a new and fantastic erection reaching far up into the sky.

What it is we do not pretend to know, but it consists of sections of iron tubing, like the funnels of a ship, placed one on top of another, and is altogether most intriguing. Some say that it is designed to carry away the smell of the kitchens; others say that we are going to have a giant meal-time hooter to end rounds that are apt to linger; but, whatever it is, the kitchen staff of the Nurses' Home must feel some slight sense of relief when each section is safely fixed.

▭

ON this page, we have great pleasure in reproducing a photograph of the Matron, Lord Nuffield and Mr. Eason, which was taken just before they set out for the Coronation. We feel that such a photograph is of unique interest, and are very grateful for permission to publish it.

Photograph by Gilbert Cousland

Miss McManus Lord Nuffield Mr. Eason

Before their departure for the Coronation Service

Obituary

Sir PATRICK HEHIR, K.C.I.E., F.R.C.P., F.R.C.S., F.R.S.Edin., Major-General I.M.S.

(Reprinted with acknowledgments to the Lancet)

SIR PATRICK HEHIR, who died on Saturday May 1st, at Hove, was a distinguished member of the Indian Medical Service, holding at different times high and responsible office and being deeply interested in both the social and scientific side of tropical medicine.

Patrick Hehir was the son of Robert Martin Hehir, of Ennis, Co. Clare. He received his medical education in Edinburgh and at Guy's Hospital, qualified as M.R.C.S.Eng., L.S.A. in 1885, and took the diploma of F.R.C.S.Edin. in the same year. He graduated later as M.D.Brux. He joined the Indian Medical Service in 1886 and immediately saw service in Burma and Tirah. He was engaged in the latter campaign during 1897 and 1898 and received a medal with clasps. He was next serving on the Mohmund expedition, but in 1898 returned to Burma as Assistant Director of Medical Services. Shortly afterwards he was transferred to Poona, holding the same position in the Bombay Presidency, while at the outbreak of the war he was at headquarters, Simla, as Deputy Director of Medical Services. He was therefore a very experienced officer when his eventful career during the war began. He was engaged in the campaign in Mesopotamia, and was several times mentioned in dispatches for his excellent work. At the surrender of Kut he was taken prisoner by the Turks and until his release did valuable work in caring for the sick and wounded, especially the Indian contingent. Released by the Turks he took up his appointment at headquarters in India as D.D.M.S., and in recognition of his fine work received the orders of C.B. and C.M.G. In the second Waziristan campaign he was again to the front as A.D.M.S., and in 1919 further hostilities in Afghanistan gave him an opportunity of earning credit, for he was mentioned in dispatches and promoted K.C.I.E., having received the C.I.E. the previous year.

Throughout his long service in India Sir Patrick Hehir was engaged in efforts, scientific and social, to prevent and control malaria in India. He made many personal researches into the life-history of mosquitoes, and in 1910 produced his work "Prophylaxis of Malaria in India," in which he went with much detail into the methods employed by the malaria sanitarian in towns and cantonments. The results of this work, with many additions and with co-operation from numerous authorities, were published after his retirement in a comprehensive volume entitled "Malaria in India." This book, not issued until 1927, detailed the general history of malaria, its geographical distribution in India, its contributory causes, prevalence and mortality. It furnished a very full history of the habits of Indian anophelinæ, this section of the work being supplied with a large quantity of admirable illustrations. The clinical history and diagnosis of malarial fevers and the various methods of prevention were all set out, and among a group of appendices important matter was added bringing the subject up to date. The work was the outcome of much personal knowledge and great industry, calling the attention of the economists and statesmen to the many sides of a menacing problem. Its production was a fine exploit during the closing years of a distinguished career.

Sir Patrick Hehir, in addition to the distinctions enumerated, possessed the life-saving medal of St. John of Jerusalem, was a Knight of Grace of the Order, and a F.R.S.Edin. He married in 1908 Dora, a grand-daughter of Edward Lloyd, who founded the *Daily Chronicle*, by whom he had one daughter. He was in his 78th year at the time of his death.

Hydrocele of the Tunica Vaginalis

Report on Cases of Vaginal Hydrocele from the Genito-Urinary Department at Guy's Hospital from the years 1910 to 1936, by A. Ralph Thompson, Esq., Ch.M., F.R.C.S.

PART II.

THE next associated condition that is noted here is that of gonorrhœa. This condition is well known to be associated with epididymitis, the globus minor being chiefly affected, and undoubtedly small hydroceles do develop in connection with this disease, and the condition is so well known that it need not occupy much space here. It may be noted, however, that there are at least eleven cases in which an infection of the

epididymis with gonorrhœa as the primary cause has been met with in association with hydrocele. The hydrocele was small in every case, and did not become chronic in any of the cases.

There are one or two most interesting points about gonorrhœa in connection with the subject that is now being dealt with. Is it true to say that the gonococcus is not a pyogenic organism? I think it is. The "pus" of gonorrhœa is quite peculiar in that the leucocytes of which it is formed are capable of taking stains extraordinarily well, and are clearly not dead until they are examined for bacteriological purposes. I believe that, when the eye is affected, the discharge from the eye is similar.

When gonorrhœal complications occur it is to be noted that fibrous formation rather than purulent reaction occurs. Thus the so-called gonorrhœal joint, or synovitis, is of a chronic, not a suppurating, nature, and gonorrhœal peritonitis is a plastic, not a suppurative, peritonitis. Further, I have never seen an abscess that occurred with gonorrhœa contain the gonococcus, and Dr. Dowling tells me that when he was in charge of the Venereal Department at Guy's he only saw one case in which gonococci were found in an abscess which had developed during an attack of gonorrhœa. So precisely in a similar way the inflammation of the epididymis that occurs so frequently in gonorrhœa hardly ever goes on to suppuration, though it may be most painful. I have never seen a case of gonorrhœal epididymitis go on to suppuration. So it is not surprising that a simple hydrocele occurs so frequently.

d. Gonorrhœa.—CASE 32. Aged 21. Had a discharge six months previous to admission. Now double hydrocele, which on the right side was large and tense and on the left was smaller. Both sacs were excised, and the patient did well.

CASE 33. Aged 43. Had gonorrhœa three months before admission and also on admission. There was no urinary difficulty, and there was a non-translucent hydrocele present, which was tapped.

CASE 34. Aged 34. Said to have had an injury, but he had undoubtedly ordinary gonorrhœa. History of six months. The discharge had disappeared, but with strapping the testicle it reappeared, although a hydrocele which had developed disappeared.

CASE 35. Aged 20. He had a phimosis. There was a slight gonorrhœal discharge, with an epididymitis. The globus minor was chiefly affected. There was also a hydrocele. All these conditions were cured with the ordinary treatment. He was also circumcised.

CASE 36. Aged 43. Had noted discharge eleven days previous to admission. Later he developed prostatitis, and then epididymitis. A hydrocele developed. As so often happens, the affection of the testicle occurred after the discharge had ceased. He was treated in the ordinary way.

CASE 37. Aged 27. Has had a discharge from the urethra for six weeks, and a small left hydrocele was noted.

CASE 38. Aged 34. Had a discharge in November, 1910. This was treated, and in February, 1911, a hydrocele had developed and there was no sign of discharge.

CASE 39. Aged 24. Three weeks previous to admission there had been a discharge. It apparently ceased with medical treatment. There was an enormous varicocele, which had led to atrophy of the left testicle. After the discharge had ceased for a week, it came back again and the right epididymis was affected, as well as the prostate. The right side of the scrotum was inflamed. There was a slight right hydrocele.

CASE 40. Aged 19. Discharge for a month, and there had been no cessation of it. Three weeks after commencement of the discharge, although the local pain was better, the caput minor and the body of the testicle became enlarged, and a hydrocele was discovered on the left side of a length of $2\frac{1}{2}$ inches.

CASE 41. Aged 28. At the end of 1910 he had had a discharge for some time, but paid no attention to it. When the discharge ceased his attention was directed to the region of the scrotum, which was red, though when it was seen by me it seemed that it was less red and inflamed than it had been. The right testicle was enlarged, but less than it had been. The left epididymis was large, and there was a right hydrocele. All the conditions were treated successfully.

CASE 42. Aged 52. This case was complicated by the fact that gonorrhœa had given rise to dysuria, and a catheter had been passed outside the hospital, but, whatever the cause, the right epididymis became hard and large, and there was a hydrocele on the right side about the size of a duck's egg.

All the above cases occurred during an attack of what may be considered as acute gonorrhœa, but there are two cases of gleet to be noted in which a hydrocele had developed :—

e. Gleet.—CASE 43. Adult, whom I saw with Dr. Spence, who had irrigated the urethra for gonorrhœa.

The discharge had ceased, but a gleet later developed, and when this was subjected to irrigation treatment, a right hydrocele developed with very little sign of any underlying trouble with the testicle, though there was a little thickening of the left epididymis.

CASE 44. Aged 24. The case notes are somewhat doubtful, but it seems that he had had gonorrhœa, but that it had been apparently cured, but later a gleet appeared, and eleven days after it had appeared a left hydrocele developed with signs of epididymo-orchitis.

We now have to consider less generally recognised causes of hydrocele than those previously considered under the last two sub-headings. In these cases there seems to have been some local infection of the base of the bladder that was associated with the production of a hydrocele.

f. Local Infection of the Bladder.—CASE 45. Aged 61. He appeared to have been affected slightly in the war in that he was neurasthenic. He had laparotomy performed for right lumbar pain in 1923, and at times he had bleeding from the rectum, and had to get up at night rather frequently to pass water. He was investigated with a view to a possible left renal stone. The right kidney was just palpable, and there was a large post-operative hernia. There was a left varicocele and a right hydrocele. The urine contained shreds. Recently there had been some dysuria.

CASE 46. Aged 42. He came in November, 1923, and had a right hydrocele, which had appeared a fortnight previously. It is stated that the urine was a brown colour for a day whilst the hydrocele was developing. The sac was excised successfully by Mr. Hallpike.

CASE 47. Aged 67. Had an operation for papilloma of the bladder, and he came to report his condition, which was satisfactory. But he had lately developed a hydrocele. This may have been due to some infection of the bladder. Slight or even severe sepsis is a common accompaniment of papilloma of the bladder.

CASE 48. Aged 64. The case was interesting in that it was one of the two cases that have occurred in my experience of retention of urine due to a papilloma of the bladder. There had been much hæmaturia, and Mr. Rink diathermised the growth. Hæmaturia had existed for a year. A hydrocele had developed. There was X-ray evidence of prostatic sand, which is associated with sepsis as a rule. There was probably some infection of the bladder.

g. Complicated Cases.—There are notes of four cases in which it was a little difficult to determine the chief feature amongst two or more associated conditions :—

CASE 49. Aged 51. Gonorrhœa thirty years previously; frequency and difficulty of micturition, also painful. There was a stricture and an enlarged prostate. He had a nasty cough. Attention to asepsis and comforting applications to the scrotum which was red and inflamed brought about a cure. There was at the same time a hydrocele which went down with the treatment, and he was eventually discharged better of his scrotal and vaginal condition.

CASE 50. Aged 38. About five per cent. of a series of cases in the early days of the Genito-Urinary Department showed an infection with gonorrhœa and syphilis. In this case also both diseases were present, and there was a hydrocele.

CASE 51. Age doubtful. In this case also there was a hydrocele with syphilis and gonorrhœa.

CASE 52. Aged 34. We shall see almost immediately that an inguinal hernia may be associated with a hydrocele, and apparently be the only cause present. There were present gonorrhœa and an inguinal hernia.

3. *Local Syphilis.*

CASE 53. Aged 28. Wassermann reaction was strongly positive. Clinically the right testicle was syphilitic. Both the testicle and the accompanying hydrocele were cured with mercury and potassium iodide.

CASE 54. Aged 26. Here bilateral syphilitic testicle was present, and there was also a bilateral hydrocele. Three months after admission to Out-Patients, the patient was operated upon and the left testicle was removed with the hydrocele on that side, and the former was generally affected with the formation of fibrous tissue.

CASE 55. Aged 43. In this case there was an acute inflammation of the right testicle, and there was evidence of both gonorrhœa and syphilis, with the formation of a right hydrocele. In this case it was interesting to note that there was also hæmaturia, and this may have produced sepsis in the bladder. I was inclined to think at the time that the syphilis was the important element in the formation of the hydrocele.

The remaining cases that call for description are of rather a different nature from those previously recorded. In the great majority of these cases there was no evidence of local sepsis, and in some few in which such local sepsis was found there was also evidence of some general infection. Without at the present time making any further observation than this we may pass to the description of the cases as revealed in the notes that are in my possession. In connection with the first associated condition, namely, the associated presence of a hydrocele and an inguinal hernia, there are eight cases in which a hernia appeared to be the primary condition, and two at least in which the hydrocele appeared to be the essential cause of the hernia, or at any rate an important contributory cause. In a few cases an ill-fitting truss may have been responsible for the production of a hydrocele.

4. *Inguinal Hernia.*

CASE 56. Aged 64. He was a patient from 1918 to 1926. Although there is no note as to the relative time and onset of the two conditions that were present, namely, a hydrocele and a hernia, there is some interesting evidence as to the effect of a hernia and a hydrocele. For whilst at first there was a tapping of both hydroceles, that on the left side recurred, and this was the side of the hernia. Radical cures of both conditions were eventually performed and with successful results.

CASE 57. Aged 71. This case shows one of the most distressing results of a large bilateral hydrocele. It was the largest that I have seen, and complicated with a very large bilateral inguinal hernia. The man was unable to reach the groin for washing purposes, and the smell was the foulest that I have ever experienced, much fouler than that of a foul bladder. The man was most distressed by it. Tapping and the application of fomentations got rid of the smell, and I have rarely seen a patient more pleased with such a result.

CASE 58. Aged 10. Reference *Guy's Hospital Gazette*, 1912. There are notes to the effect that the inguinal hernia which was present on the right side preceded by some three years the formation of a hydrocele, which was of the ordinary vaginal type. Radical cure of both conditions was performed, with good result.

CASE 59. Aged 38. Bilateral hydrocele and right inguinal hernia. There are no notes of the prior condition, but it may be that in this case the hydrocele led to the formation of a hernia on one side. Radical cure of all three conditions—immediate result was successful.

CASE 60. Aged 77. Here there was also evidence that the hydrocele was prior to the hernia, but the notes are not very good. In 1924 only the hydrocele was mentioned, but in 1925 an inguinal hernia on the same side, namely the right, was noted.

CASE 61. Aged 42. In this case an inguinal hernia may not have been the only cause, as the patient had, in addition to a right hydrocele, a right varicocele, which may have been due to the pressure of the hernia, in which case it is difficult to exclude the hydrocele as being also caused by the hernia. But the main trouble to the patient was a chronic gleet. Radical cures were performed by the house-surgeon, Mr. Thomas, and the patient did well, and, in addition, lost the gleet.

CASE 62. Aged 64. In this case the notes are not very clear, but there were co-existing a left hydrocele and a left inguinal hernia, and syphilis with strong positive reaction in 1935.

CASE 63. Aged 77. Here there was evidence that the hernia preceded the formation of a hydrocele. There was a history of an inguinal hernia for fifty years on the left side, and a bilateral hydrocele for only nine years, and the left hydrocele was much larger than the right.

An ill-fitting truss may be associated with the production of a hydrocele, but in one of the following cases, namely Case 64, there is some doubt as to this, and it may be that the presence of an associated hernia may have led to the formation of a corresponding hydrocele. But in both cases there was a badly-fitting truss.

5. *Ill-Fitting Truss.*

CASE 64. Aged 74. Seen by Mr. C. H. Mills, my first clinical assistant, who sent the case up to see me as he thought the condition of the testicle was malignant, and I rather agreed with this diagnosis. The hydrocele was present on the right side, and when the fluid was taken away with tapping it was found to contain cells, of which 30 per cent. were lymphocytes. After the tapping the testicle felt normal. There were no abdominal glands to be felt. The cord was normal. There was also a left inguinal hernia, and the truss which was being used was noted by Mr. Mills to be ill-fitting, but in the absence of pain or local tenderness due to the truss, it may well be that the hernia was the main cause of the hydrocele in the first place. As there was undoubted evidence that the testicle was malignant, and if not malignant was probably useless, radical cure of the hydrocele with orchidectomy was done by the house-surgeon. The testicle was found to be the seat of chronic inflammation. Blood was found in the vaginal cavity at the operation.

CASE 65. Aged 61. Had a hernia for which a truss was ordered and applied, and three days after the application of the truss he noticed that there was a swelling of the corresponding testicle. This was found to be due to a hydrocele, and after this was tapped the corresponding epididymis was found to be hard. The three conditions were all found on the right side.

6. *Following Operation for Hernia.*

CASE 66. Aged 53. Bassini's operation had been performed for inguinal hernia, and on the same side a hydrocele developed after the operation. As it was stated that the swelling of the testicle was due to malignant disease, it was removed, but there was no subsequent evidence that the testicle was malignant.

If Autopsy 9 is now referred to it will be found that there is recorded the case of a cancer of the rectum that was associated with the formation of a hydrocele. Anatomically considered, a sclerosing cancer might possibly press upon the vas, but almost certainly upon the lymphatics of the testicle

as they proceed upwards to the aortic abdominal glands.

There are four cases noted in this collection of cases, in which a hydrocele appears to have been developed in connection with a cancer of the rectum, or some chronic condition in the region of the rectum.

7. *Rectal Conditions.*

CASE 67. Aged 50. An operation for " fistula " had been done by me in 1914. He came again in 1932, eighteen years after first attendance. He then had rectal and bladder incontinence, defæcation was painful, and generally he was weaker than he had been, and had lost weight. During the past three weeks the patient had noticed a swelling in the left testicular region, and this was due to a large left hydrocele. Per rectum a large crateriform cancer was discovered situated high up and on the posterior surface. The urinary incontinence suggested some local trouble in the bladder.

CASE 68. Aged 36. Anal fistula and left hydrocele. Both treated and the anal sphincter was divided and the hydrocele was tapped, and the patient did well.

CASE 69. Aged 65. Had a hydrocele which was repeatedly tapped. He suffered from constipation. Of course, here too much attention must not be directed to the case from the notes that are made, but when we consider the very large size the sigmoid and the cæcum may attain we must not forget that the constipation may be rather more than an associated condition.

A case may be quoted here in which there appeared to be some lymphatic connection between the anal region and the scrotal and testicular lymphatics. The case is not numbered in this series of cases, as it was not a hydrocele.—Male, aged 49. Had had painful bleeding piles treated by the method of injection. Lately he had developed an inflammatory swelling of the right testicle. Attention to this condition resulted in cure.

The cases to be now noted are interesting in that they all show the appearance of a spermatocele as well as a hydrocele, and in one of them it was proved that there was a good deal of fibrosis round the spermatocele, which might have led to the formation of a hydrocele by lymphatic blockage. I recollect well in this connection the words of Sir George Johnson in his book on " Diseases of the Kidney," where he says that because there may be an anatomical or mechanical condition present we must not too hastily assume that this is the real cause. I suppose that pyloric stricture is a condition in point. But the accompanying fibrosis of one of the cases shows that a condition such as hydrocele may develop as a result of mechanical obstruction.

It may be mentioned, in order that there may be no confusion in anyone's mind, that a spermatocele contains non-albuminous fluid and many spermatozoa; whilst hydrocele fluid contains much albumin and no spermatozoa.

8. *Spermatocele.*

CASE 70. Aged 39. The patient had large bilateral swellings each of a double nature, and one of the swellings on each side was a spermatocele, and the other was a hydrocele. These were excised and orchidectomy was done on the right side. Dr. Nicholson's report is very important and interesting. He says that there is a fibrosis round dilated epididymal tubes, but the testicle is quite healthy.

CASE 71. Aged 52. There was a left spermatocele, and this was excised by an open operation, and when the vaginal sheath was opened it was found that there was a small hydrocele.

CASE 72. Aged 58. Attended as an out-patient for many years, and at times a cyst was tapped and found to contain strongly albuminous fluid, and at times a cyst was tapped and found to contain spermatozoa and no albumin. A note is made that the swelling was double on the left side. There was also a small left inguinal hernia, but the fact of the presence of a spermatocele must not be forgotten.

When I was house surgeon at the Hospital, both in the Front Surgery as well as to Sir Charters Symonds, I noticed, with others, a good many cases of traumatic pleurisy which occasionally were found to have an effusion of pleural fluid.

If we bear this point in mind it will not be surprising that there are five cases in which trauma may have played a part in the production of a hydrocele.

9. *Trauma.*

CASE 73. Aged 52. The patient was a nurseryman, and I know of no more common history than that of the gardener who gets urinary trouble, *e.g.*, hæmaturia, and the constant bending and straining are most deleterious. However this may be, in this case the patient definitely volunteered the statement that he had sustained an injury and that the swelling had come on after the injury. The injury was nineteen months previous to admission. There was a gradual increase in the size of the swelling for thirteen months, and then it appeared to become stationary in size. The swelling was a left hydrocele. There was no history of venereal infection. The swelling disappeared at times, or at any rate got less. I believe that hydroceles do diminish in size at times, and get larger again.

CASE 74. Aged 48. He stated that he fell on his back whilst hauling on a rope, and that the day after this he noted that the testicle was swelling. This was due to a left hydrocele, which was tapped.

CASE 75. Aged 59. In May, 1926, he sustained an injury to his right testicle and a hydrocele developed, and three months afterwards the hydrocele was tapped, and twenty-four ounces of fluid were taken away. Although a positive Wassermann was given, yet the trouble bore too close a relation, and the hydrocele was so large that it is almost impossible to believe that the injury had nothing to do with the production of the hydrocele. Moreover, there was no evidence that the testicle was syphilitic.

CASE 76. Aged 25. There was no sign of venereal disease, and no discharge from the urethra.

He gave a history of swelling of both testicles after riding a horse two months before coming to Guy's. There was a slight hydrocele on both sides. There was no pain in the testicles.

CASE 77. Aged 40. Gave a history of having been kicked in the right testicle, but suspicions were rather aroused by the statement that he had several kicks. He, however, denied venereal disease, and his wife has had six children and no miscarriages. The Wassermann reaction was negative. Eight months after the stated injury he came to Guy's with a hydrocele on the right side.

10. *Tubercle.*

In my experience tubercle of the testis is not a common cause of hydrocele, and there is only one case of this :—

CASE 78. Aged 14. In this case a tuberculous testicle was removed, and at the same time a hydrocele on the same side.

In other lesions than those of genito-urinary disease, trauma is well known to pave the way for a tuberculous infection, and the following case illustrates the possibility of injury in leading to tuberculous infection of the testis with the later occurrence of tubercle.

11. *Trauma plus Tubercle.*

CASE 79. Aged 31. He stated that in 1911 he was jumping over a ditch and hurt his left testicle. This had become swollen, and a non-translucent hydrocele was tapped and clear fluid drawn off. Later the left testicle became clinically tuberculous, and both epididymes affected with the right vesicula seminalis. He was known to have died in 1925 with tuberculous kidney.

It is well known that mumps may lead to an orchitis, but it has not fallen to my lot to see many cases, and I do not know if such an inflammation ever gives rise to a vaginal hydrocele, but it would seem that influenza may give rise to orchitis, and Mr. W. H. Bowen, of Cambridge, has drawn attention to this matter. I have certainly seen one case in which an attack of influenza appeared to have brought on an orchitis. But it must always be recollected that during an epidemic, particularly of influenza, the diagnosis of that disease is, perhaps, commoner than its actual occurrence, and we know from a study of post-prostatectomy orchitis that general symptoms may arise long before the local signs.

Thus we must be particularly careful in asserting that influenza may lead to the formation of a hydrocele.

The next case is one in point, for the man had had renal trouble some time before he was seen, and this may have led to the hydrocele formation rather than a supposed attack of influenza.

12. *Influenza.*

CASE 80. Aged 40. In 1924 he was in bed with renal trouble. Two months before being seen at Out-Patients he was in bed with influenza, and whilst in bed the left testicle swelled, and the private medical attendant tapped a hydrocele. When he was seen at Guy's there was a small amount of pus in the urine, and there was some sensation of uneasiness in the back part of the urethra. The urine was alkaline, but pus cells were identified by Dr. Ryffel.

In the list of Autopsies there are at least three cases of hydrocele being associated with cirrhosis of the liver. There is one case in this series of notes in which the liver came under suspicion.

13. *Enlarged Liver.*

CASE 81. Aged 70. Had a hydrocele tapped on three occasions, and lately had pain in right groin, especially persistent after coughing. When seen later there was day and night frequency and urgency. There was a burning sensation in the perineum. The right iliac fossa was tender, and the liver was palpable and large. There was a right hydrocele present. Later this was tapped.

That the drinking of alcohol may have a deleterious effect upon a hydrocele that is already in existence seems to be proved by the following case :—

14. *Alcohol.*

CASE 82. Aged 60. During the previous nine months he had noted that the right testicle was becoming larger than it had been. There was no history of trauma or of venereal disease. He was tapped and one pint of fluid was withdrawn. Five months later he was again tapped. During the next six months he was tapped twice, and when he came the last time he stated that the hydrocele had filled up very rapidly during the last three weeks, as he was engaged on overtime work and this meant always in his case a good

deal of alcohol being drunk, and he blamed this for the rapid increase in size of the hydrocele.

The next case is mentioned as merely a number, but what notes that there are indicate that the patient had definite gout when the hydrocele developed; the latter was removed.

14. *Gout.*

CASE 83. Aged 57. Hydrocele associated with gout.

In two cases a cardiac condition may have been partly responsible for the formation of a hydrocele, but in neither case was there evidence of extreme heart failure, though it will be noted that in one of the cases the heart was thought by the house surgeon not to be fully compensating for the valvular disease.

15. *Heart Disease.*

CASE 84. Aged 47. There are few notes, but it appears that there was a hydrocele, which had been tapped outside the Hospital. He was admitted, and then it was found by the house surgeon that he had some valvular lesion, and that the heart was dilated and apparently not compensating.

CASE 85. Aged 12. There had been an adherent prepuce, and circumcision was performed when this led to trouble. Later the patient developed rheumatic fever, and he then had mitral stenosis. There was a right hydrocele. Operation was not considered advisable.

The final case to be recorded is of doubtful significance, but in spite of the diagnosis at Brompton Hospital, of course there may have been a tuberculous origin.

16. *Doubtful—? Tubercle.*

CASE 86. Aged 22. The left testicle had been enlarging for three months when he was seen at Out-Patients. There was no trouble with micturition, and there was no pus in the urine. He had pleurisy two years before being seen at Guy's, and had been in Brompton Hospital, where it was considered that there was no tubercle. There was a left hydrocele, and this was tapped.

This concludes the series of cases in which an associated condition was found that perhaps in many of the cases may be raised into an actual cause, but before any further discussion is made it may be well to note two further cases which will not be numbered, in whom it appears that a hydrocele of doubtful origin appeared definitely to have led to the formation of an inguinal hernia on the same side.

Formation of Inguinal Hernia by a Hydrocele.

CASE 87. Aged 66. There was evidence from the history and the attendance of the patient at Guy's that there had been a hydrocele for ten years, and this was tapped at intervals. Later it appeared that an inguinal hernia had developed, and this was clearly secondary to the appearance of the hydrocele. Both were situated on the same side, but the side was not recorded.

CASE 88. Aged 68. In this case the patient was a highly intelligent man, who stated very definitely that the hydrocele had come before a hernia. I think that the hydrocele had been tapped before by someone else, but when I saw him there was a definite inguinal hernia on the left side, the side of the hydrocele, and radical cure of both conditions was undertaken, with a highly successful result, as there was no sign of recurrence of either condition ten years after the operation.

When the last two cases are omitted, then there are eighty-six cases in which an associated condition was found in addition to the presence of a hydrocele, and it is possible to regard some of the cases as showing that the associated condition was really rather of the nature of an actual cause. In addition to the above cases, there are notes in exactly forty cases of hydrocele, in which no observation is made as to the presence of other conditions in addition to the hydrocele. Thus there are rather more than two-thirds of the total number of cases in which a cause is at least suggested. A summary of these causes may now be given.

CAUSES OF HYDROCELE

1. Injury to contents of scrotum.
2. Infection of the contents of scrotum.
   - (*a*) Local—
     - (1) Acute septic.
     - (2) Chronic septic.
     - (3) Tubercle.
     - (4) Syphilis.
   - (*b*) Urethral or vesical sepsis, *e.g.*, gonorrhœa, stricture and enlarged prostate, growth of bladder.
   - (*c*) Rectal or anal disease.
   - (*d*) General infection, *e.g.*, pneumonia or influenza.
3. Pressure.
   - (*a*) Local—
     - (1) Inguinal hernia.
     - (2) Spermatocele.
   - (*b*) General—
     - (1) Cardiac failure.
     - (2) Cirrhosis of liver.
     - (3) Septic peritonitis.

In all probability the cases of cirrhosis of the liver and of cardiac failure would have other symptoms of trouble besides the presence of a hydrocele, but a large liver might always be worth looking for in a case of hydrocele.

But it is clear from these notes that a hydrocele is not the simple condition that it is commonly thought to be, and it will be well if surgeons will examine their cases of hydrocele and endeavour to exclude especially infective conditions of the urethra and bladder as possible causes.

There can be no doubt that the treatment of vaginal hydroceles by the method of tapping is not highly satisfactory, and it may well be that attention to the above remarks based on a series of cases will lead the surgeon not only to the correct diagnosis, but also to the proper treatment. If the source of an infection can be got rid of it is clear that the hydrocele sac will be subjected to less irritation, and to that degree will benefit by the source of the irritation being got rid of.

In conclusion I believe that it is generally held that in old people when a hydrocele sac is excised, the testicle on the same side should be removed also. The notes of the following case seem to point in the opposite way :—

Male, Aged 65. A hydrocele had been tapped in December, 1925, but it had recurred quickly, and in two months' time was as large as ever it had been. A second tapping was done at Out-Patients, with a view to admission later. The testicle was found to be very hard, and the case was considered to demand orchidectomy in accordance with the usual teaching upon the subject. After admission early in the following month the testicle was clinically a normal organ, being soft and plump, and with normal sensation, and the hydrocele had not recurred.

Since having experience of this case I am a little against castration for hydrocele in elderly men.

ADDENDUM

A case of a man aged 63, with cancer of prostate and a bilateral hydrocele.

A case of a man aged 66, with gastric cancer and a hydrocele (side not stated).

If we take into account the large amount of fibrosis that may occur when a cancer develops, we may add these two cases to the list of associated conditions or causes, and no surprise need be entertained at their entry.

Bilbao Holiday

By Richard W. B. Ellis, Esq., M.D.

REACHING Bilbao by the ill-fated French air liner recently brought down by insurgent planes, we landed at the ramshackle aerodrome and drove into the centre of the city. Everywhere the streets and squares were crowded with people, groups of men standing talking or unloading sandbags, women and children for the most part sitting on the pavements around the bomb-shelters that have been set up in every street. I asked how it was there were so many civilian men and apparently no soldiers, and learnt that actually these *were* the soldiers. Most of them had no uniforms, or at most a lumber jacket with a badge stitched on the pocket, but one could pick out those who were just back from the front by the roll of blankets slung over their shoulder. The front is now so near the city that lorries, their roofs camouflaged with boughs, can transport the men to and fro in little more than half an hour. In spite of the crowds and the pleasant, matter-of-fact spirit of the Basques which still prevails, the city is unspeakably desolate. The shops are closed or opened only for an hour or two a day (since they have nearly all long since sold all they had), the cafés remain open as meeting places, but they too have nothing to sell except camomile tea, without even sugar to make it palatable.

It is hardly realised here that, although a few British foodships have run the blockade, the population of Bilbao has nearly doubled from the continual influx of refugees during the past few weeks, and that the people are still starving. There is only enough food in hand to provide for ten days' rations, and these are limited to beans, rice, olive oil and 35 grammes of black bread. Coffee can be had three times a week, meat occasionally when a refugee, evacuated from his farm, drives his cattle into Bilbao to be slaughtered, whilst milk, eggs and butter are practically unobtainable. Dogs and cats (which have a not unpleasant taste, similar to rabbits) have practically disappeared from the streets.

As far as possible the children have been provided for at the expense of the adults. During the medical examination of the group of 4,000 children selected for evacuation to England, we found comparatively few cases of the severest types of marasmus, though the great majority of the children showed evidence of wasting and deprivation. Probably due to the almost entire absence of animal fat from the diet, the whole group showed an appallingly high incidence of dental caries, although the majority had clearly been well fed and cared for before the recent blockade. Many also showed hyperkeratinisation

of the skin around the hair follicles. As a whole, however, the general health of the children was surprisingly good considering the conditions of semi-starvation, overcrowding and continual bombardment under which they have been living for many weeks. It was particularly striking that we saw *no* cases of chorea, and hardly any of those "nervous children" who in London appear in the out-patient department with such unfailing regularity. Trachoma is fortunately extremely rare in the Basque district, and the only two cases which we had to exclude from embarkation for this cause were brothers who had come north from Valencia.

The bombardment of the city is a matter of daily, and often hourly, occurrence. On the second day I was there the syrens had given warning of planes overhead, and high-explosive and incendiary bombs had been dropped five times before 8 a.m. The schools have all been closed owing to the continual necessity of taking cover, and during clear weather all normal activities are completely disrupted. The city welcomes a rainy day with a sigh of relief, as it means visibility will be too poor for intensive bombing! The shelters provide little real protection except from flying splinters, but they give a sense of security to the women and children, and the roads clear as though by magic at the syren. Unfortunately the sphincter control of small children is not at its best during air raids, which may last an hour or more, and it is not unnatural that the few underground lavatories in the city are amongst its most popular "refugios."

The desperate urgency of removing children from the city under such circumstances hardly needs emphasis, whilst the imminent possibility of its fall adds a still more obvious reason. It should be remembered that the Basques are fighting very largely against foreign troops, being bombed by German planes from the air and attacked by Italian and Moorish troops on the ground. Whatever whitewashing of the Italian troops' behaviour in Addis Adaba may have been possible, it will hardly be arguable that the Moors are pretty fighters or desirable occupants of a captured town. It is not many years since a victorious Moorish regiment marched past the general with every bayonet decorated with enemy genitalia, and already appalling outrages have occurred in captured villages where the Moors have more or less deliberately been allowed to get out of hand for twenty-four hours. It is no argument to quote "Red" atrocities elsewhere, whilst in any case the Basques are most obviously a decent, self-respecting people, only anxious to be allowed to get on with their normal lives and look after their own concerns. Whatever one's personal political colour, it is impossible not to

Women and Children waiting outside a Refugio (bomb-shelter) for the sirens (Coronation Day, 1937)

sympathise with an utterly war-weary people who are putting up a desperate defence against what is virtually foreign invasion of their homes and liberties. Franco's grim jest that " the women and children of Bilbao will make good sport for my Moors " hardly awakes, in Bilbao at least, the smile it perhaps deserves.

The children chosen to come to England were selected roughly in the proportion of the different political parties, the Basque Nationalists (who are those particularly anxious to preserve the Basque language and traditions) being the largest single group. There was the greatest competition for vacancies in the " Expedicion," since the Basques have always had an unlimited admiration for and faith in England, and feel they can place their children in English hands with complete confidence that they will be cared for and returned to them under happier circumstances safe and well.

Cathedral Colonnades sandbagged to make a Refugio

Basque children lining up outside a Refugio for medical examination

After the medical examinations were completed, I had to make a hurried flight back to England in connection with arrangements here, returning after 16 hours to Bilbao. On both flights we were sighted and followed by Franco planes, but M. Galli, the French " ace " flying the machine, managed to leave them well behind. The children were embarked sardine-wise in the *Habana*, an old liner converted for refugee transport, and in the early morning we slipped out of the harbour to meet our naval escort and a high sea in the Bay of Biscay. It was a miserable first day for nearly all the children, whose long period of semi-starvation left them in poor shape to face severe seasickness. Fortunately the rain held off, and they were able to lie about the decks, as below decks conditions were horrible. Next day, with a calm sea, they nearly all showed the barometric change which reflects a stomach at ease with itself.

Owing to the extreme expedition and co-operativeness of the Port Medical Authority, Dr. Williams, at Southampton, the whole four thousand were re-examined and disembarked in two days, and transferred to the huge camp that had been prepared for them at Eastleigh. From there they are being drafted in smaller groups to institutions and homes throughout the country. Many of these are being provided by Catholic organisations, the Salvation Army, and directly by the National Committee for Spanish Relief, which is responsible for the whole evacuation, financially and otherwise. It is hoped that local committees will be able to organise homes for twenty or more children or be responsible for the financial " adoption " of children elsewhere. Owing to the desire for subsequent repatriation, it is felt that it will be more satisfactory to keep the children together in this way, so that they can receive their own schooling, rather than to put individual children into private families or English schools.

As the whole burden of this work has to be borne by voluntary aid and subscription, the responsibility of the National Joint Committee is still obviously heavy.

False Gemination between Upper Second and Third Molar Teeth

A Casual Communication read to the Dental Society by J. Blair Hardie, Esq.

MR. PRESIDENT and GENTLEMEN,—Gemination is defined as the union of two or more teeth by one or more dental tissues. There are two forms—true and false gemination. True gemination occurs developmentally and the union is usually one of all the dental tissues. False gemination, on the other hand, occurs pathologically, and is a form of

productive periodontitis in which two or more teeth are joined together by their cementum alone. This productive periodontitis is caused by a mild but persistent irritation which acts as a stimulant. If the irritation were of a more severe nature, one would expect the cells to degenerate and suppuration of the periodontal membrane to ensue.

In the formation of pathological cementum, expansion of the periodontal membrane takes place, due to the increased blood supply and the presence of an inflammatory exudate. This leads to an increased activity of the cells, which in its turn gives rise to the organisation of fibrous tissue, around which calcium salts are deposited. This deposition results in the formation of a layer of pathological cementum. Simultaneously with this deposition, there is an absorption of the bony wall of the tooth socket by the osteoclast cells on the opposite side of the periodontal membrane.

In the ground section made transversely through the buccal roots of a case of false gemination between upper second and third molars, the incremental lines of Salter are well marked in the pathological cementum, thus demonstrating its intermittent deposition. The presence of many more lacunæ than are to be found in normal cementum and the fibres of Sharpey can also be plainly seen. Between the two teeth there are one or two spaces where the remains of the periodontal membrane must have been enclosed by the process of cementosis. The roots of the second molar also show pathological cementum between them. On the disto-buccal root of the second molar there is evidence of absorption having taken place before the exostosis, and the presence of Howship's lacunæ can be seen on the distal surface of this root. On the fused root of the third molar, however, there has been no such absorption, since the granular layer of Tomes can be seen beneath the developmental cementum.

The causes of the irritation which may result in cementosis may be divided into three groups :—

1. Those causing chronic irritation of the periodontal membrane, such as chemical irritation, traumatic occlusion and bacterial infection either from the root canal or the gum margin.

2. Those causing chronic inflammation of the pulp, namely, caries, chemical irritation, or excessive stimulation of the pulp by heat and cold.

3. Direct irritation due to the pressure of a misplaced erupting tooth.

False gemination is most common between upper second and third molars, and these specimens are cases of gemination between these two teeth. It occurs elsewhere, however, and Mr. Pritchard has a specimen of a case of false gemination between a canine and a premolar, but apparently there are no records of a case of false gemination between a second and third lower molar. Considering the number of impactions between these two teeth, this may seem rather surprising, but it is, no doubt, due to the fact that the enamel of the crown of the third molar is in contact with either the crown or possibly the root of the second molar. Thus, unlike the impaction in the upper jaw, these similarly misplaced teeth do not have the cementum of their roots in contact.

The history of one of these cases is of interest. Miss A., aged 30, consulted her doctor in 1931 concerning an intermittent pain behind the left eye. He could find no cause for the condition, and sent her to her dental surgeon. There were no radiographs taken at this time, but since these teeth were removed, apparently the upper left second premolar and the first molar were suspected. This gave partial relief for a time. At a later date, however, the pain behind returned with increased severity, and, in view of the fact that the left eye watered in any strong light, the patient consulted an ophthalmic surgeon.

During the autumn of 1935 the patient underwent an operation for chronic appendicitis and, due possibly to her lowered resistance, the bouts of pain became more severe and prolonged.

In the early summer of 1936, when the patient had recovered from the effects of this operation, she consulted another dental surgeon and gave the following symptoms : The pain behind the eye was worse than before and strong light was avoided. There was a subcutaneous rash beneath the skin of the face and she had been troubled for some time previous to the visit with a tendency to vomit, particularly in the morning. This was thought to be the after-effects of the operation.

On clinical examination the upper first premolars were suspected of being dead teeth. There was an amalgam filling in the upper left second molar which was leaking. The other teeth and fillings appeared to be in good conditions and there was no evidence of caries. In the lower jaw there were no molar teeth present, and, as the patient remembered having a number of teeth extracted at the back of the mouth, the presence of impacted upper third molars was not suspected.

The amalgam filling was removed from the upper left second molar and the cavity dressed with eugenol and zinc oxide. There was no lining beneath the filling, but the pulp was vital and there was no marked caries in the cavity. Radiographs were taken of the upper premolar and molar regions, and these revealed pronounced osteitis at the apex of the upper right first premolar and impactions of both upper third

molars. It was decided to remove, under nasal gas, the infected premolar and the second upper molars on both sides, the latter being removed to relieve the impactions. The connection between the upper second and third molars was not suspected at the time of operation.

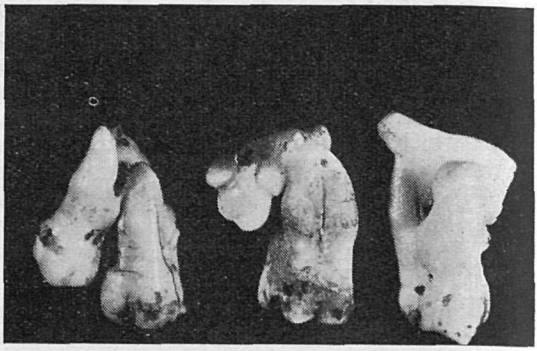
The extraction of this specimen (A) was not unduly difficult, but, on taking the second molar buccally, it was impossible to avoid the laceration of the palate with the root of the third molar. The tuberosity was not removed and the antral floor remained intact. There was, however, a tear on the palate an inch long.

The recovery was, as is to be expected, attended by a certain amount of pain, but the sockets healed normally and the sickness only occurred once or twice after the teeth were removed. In one month the patient was seen again and the rash and the pain behind the eye were no longer present.

It is interesting to speculate as to the cause of this case of false gemination, which, although the result of a chronic irritation, may have arisen in any of the ways previously stated. The third molar was completely unerupted, and it is possible that the irritation was set up by a chronic pulpitis due to the unlined and leaking filling in the second molar. In support of this one can see that the exostosis is confined to the roots of the second molar, whilst the root of the third molar is of almost normal shape. This leads one to think that the irritation is most likely to have arisen from the pulpitis of the second molar, since, if it had been due to the pressure of the erupting third molar, one would expect to find the exostosis equally on both teeth. Similarly, if the exostosis were due to bacterial infection of the periodontal membrane of the second molar, it seems probable that this infection would have spread to the periodontal membrane of the third molar with which it is in contact. This would also lead to an equal exostosis of both teeth, as can be seen in specimens B and C.

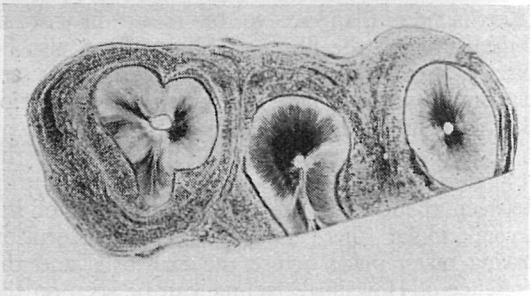
In conclusion, I would like to suggest that the practice of routine X-rays of all patients at the age of sixteen for the presence and position of third molars should be carried out. On the findings of these radiographs it would be possible by deciding upon suitable treatment, not only to reduce the number of these cases of false gemination, but also to prevent many cases of impaction in both the upper and the lower jaws. The treatment would consist of the extraction of the second molar or, in certain cases, the first molar, thereby allowing the third molar to erupt into a functional position. At this age the third molars are more likely to erupt satisfactorily than at a later date, when they might never become functional. There are, of course, a large number of cases where the impacted teeth are so misplaced that the only treatment lies in the removal of the teeth themselves.

PHOTOGRAPH OF CASES OF FALSE GEMINATION

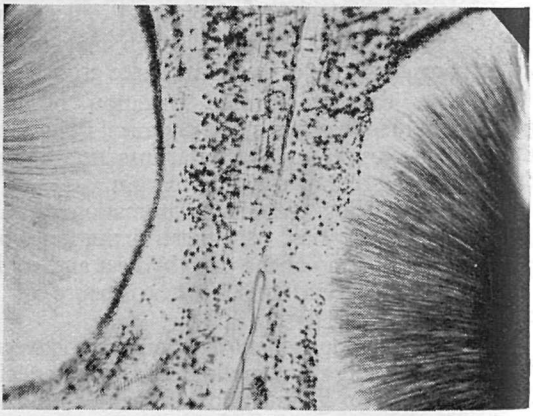


C B A

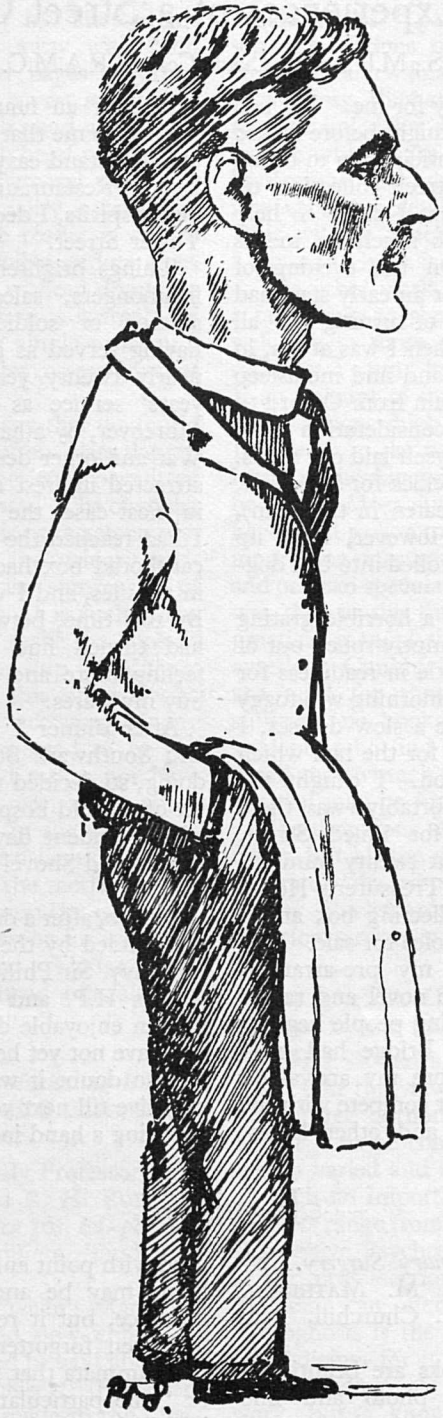
Ground Section through specimen C



Showing fused roots of third molar and buccal roots of second molar.



Same section showing the area between third molar and disto buccal root of second molar at higher magnification.



W. R. S.

Some Experiences of a Street Collector

By W. W. Webber, Esq., M.S., M.D.Lond., Lieut.-Colonel R.A.M.C. (T.F.), (Guy's 1885 to 1892)

MAY 4th was a great day for me. For had I not for at least a fortnight before looked forward with eager anticipation to trying my unaccustomed hand at street collection on Hospitals' Day, and doing what I could to help our Guy's, which had done so much for me as student and practitioner? On the evening of May 3rd all my preparations for an early start had been made. I thought at first of turning in "all standing," as we used to say when I was at sea, in case the morning would come and find me asleep and too late for the morning train from Oxford to Paddington. This seemed on consideration to be unnecessary, so my wife and myself laid our plans. She set my long-disused alarm clock for 5.15 a.m., prepared my breakfast (to be eaten in the train), and enjoined an early bed. However, I sat up reading until nearly 11.30, and rolled into bed dog-tired just before midnight.

The next thing I knew was a horrible grating noise—my trusty clock. I promptly rolled out of bed and put on the electric kettle in readiness for a cup of tea and a shave. The morning was foggy and cold, and, being by nature a slow dresser, I was just ready by 6.40 in time for the taxi which was to carry me to the station. I caught the 7.10 a.m. to Paddington comfortably, was there at 8.50, and made at once for Praed Street, arriving at Mark Lane in about twenty minutes. At 10 o'clock I reported at the Treasurer's House and was given a cardboard collecting box and a sort of tray filled with button-holes for sale. Mr. Etheridge despatched me to my pre-arranged pitch, London Bridge, and the novel and rather embarrassing business of dunning people began.

I soon found that London Bridge had been pretty thoroughly combed before my arrival on the scene of action. I could not compete with the more attractive Guy's nurses and other ladies, and, after an hour's work and many rebuffs, it seemed to me that the time had come for some tea and a "stand easy," not to mention a smoke. A Lyons' Restaurant met the case, and, feeling in better spirits, I decided to try my luck along Great Tower Street.

Things brightened a bit here, as many of the fishmongers, salesmen and packers were old seamen or soldiers. Fortunately I am both, having served as a Volunteer and Territorial for nearly twenty years and done more than four years' service as a P. and O. ship's surgeon. Moreover, by a happy thought, I was wearing my War and other decorations and medals, and these attracted interest and questions, the result being in most cases the sale of a rosette. By the time I had reached the end of the Tower Terrace, my cardborad box had collected about nine shillings in pennies, and I was thoroughly enjoying myself. By this time, between 12 and 1 o'clock, the day had turned fine and warm, and people were feeling more and more friendly and inclined to buy my wares.

After dinner I tried again along the Borough and Southwark Street, but there was not much doing, so decided to hand in my checks and see a bit of my old hospital and its surrounding haunts of my student days—St. Thomas's Terrace, the "Ship and Shovel," Maze Pond, the Park and the Chapel.

And so, after a delightful tea in the Board Room, surrounded by the portraits of my old teachers—Dr. Pavy, Sir Philip Pye-Smith, Sir Henry Howse (I was H.P. and H.S.)—the time came to go, and an enjoyable day was over.

I have not yet heard the result of the collection, but no doubt it was satisfactory. I only hope I may live till next year and again have the pleasure of taking a hand in helping our Hospital.

Reviews

Recent Advances in Genito-Urinary Surgery. By HAMILTON BAILEY and N. M. MATHESON. Published by Messrs. J. A. Churchill, Ltd. Pp. 213. *Price* 15*s.*

ALL Mr. Bailey's textbooks are beautifully produced. In all the photo and line diagrams are liberally distributed, clear and to the point. Mr. Bailey's style, too, is quite distinct in medical textbooks. It is facile, glib and chatty. The *mot* and even the wise-crack are used with point and effect. The matter so driven home may be and sometimes is of minor importance, but it remains when much of the rest has been forgotten. Few of his readers forget the gummata that "melt as dew before the sun" or "the particularly damnable form of practical joke" that results in a rupture of the rectum.

In "Recent Advances in Genito-Urinary Surgery" this incisive style is more cryptic, and the effort at condensation more apparent. With a

book in which there is much that pleases, our chief quarrel is that Mr. Bailey has allowed his powers of compression to run away with him. Within these two hundred odd pages of crisp, clear English there is crammed a vast amount of material, much of it dealing with good work from reliable sources, which appears to be of permanent value; much more with the ephemeral stuff with which the literature of this speciality is crowded. It is all there together, and the reader is left to back his own judgment. Mr. Bailey seldom gives his horse away; if he does, it is without divulging the reasons for his choice. There is scarcely an attempt to assess the value of a single procedure described, still less at a broader assessment of modern trends in urology.

Well, it is still permissible to say that we found the book good reading and often stimulating. Where personal reading and experience permitted we were able to confirm its accuracy. The chapters on ureteral transplants, Harris prostatectomy, sympathetic surgery in urology and urinary antiseptics are admirable and concise summaries of the literature on these subjects. It is such chapters, and there are many, which make the book of particular value to the Fellowship candidate, without specialist experience in this subject, who will find accurate and palatable accounts of any procedure with which he is expected to be acquainted. For those who would rather not have their medicine straight there are many such welcome Bailey touches as this, in the section on the treatment of senility by vaso-ligation: "P. Schmidt, a great enthusiast for the method, went to Shanghai and operated on a number of elderly prisoners, who did not know why or for what the operation was being performed. Under these truly scientific premises the prison officials and others noted many striking results."

Buchanan's Manual of Anatomy (including Embryology). Edited by Professor J. E. FRAZER, D.Sc., F.R.C.S. Sixth Edition. *Price* 35*s*.

Manual of Practical Anatomy. By Professor J. E. FRAZER, D.Sc., F.R.C.S., and R. H. ROBBINS, M.A., M.D. Two Vols. *Price* 10*s*. 6*d*. *per vol.* Both published by Messrs. Baillière, Tindall & Cox.

OF the above volumes Buchanan's Manual is well known already, and now enters its sixth edition. Little need be said about it, for it resembles its predecessor closely. However, many new additions have been made to the illustrations, which are quite adequate. The typography is excellent and the indexing, an important point, is full. Each "part" has its angiology, neurology and myology described in the same section, an arrangement which enables the student to study the "part" as a whole. There are separate sections on embryology and osteology. If the student's finances run to a second textbook of anatomy, Buchanan's Manual may be cordially recommended for placing beside his Gray. One feature which both Professor Frazer's books have in common, and which is not to be found in Gray, is a very complete glossary of anatomical terms. This will be much appreciated by those whose Latin and Greek is somewhat rusty.

The other work, published in two volumes, is a newcomer to the field, and should prove very welcome to those students of anatomy who aim rather at a sound knowledge of the essentials than at an attempt to carry in their heads all the detail of a science which is distressingly rich in detail. It may be in the power of some to retain all they learnt in the Anatomy Department, but these must be rare. Most students in their clinical studies have good reason to regret that they did not spend more time mastering the essentials of anatomy, and one can speculate to what extent this deficiency was due to the quality and arrangement of the practical manual they used. Here at Guy's the excellent Cunningham is almost universally in use, and for those whose mental powers are sufficient no book could be better, but to those students who find themselves at sea in so much detail and so much small text, Frazer and Robbins' Manual may be highly recommended.

The directions for dissecting are cut to a minimum, but all the main structures are clearly and accurately described. In these volumes, as well as in Buchanan's Manual, the Birmingham Revision terminology is used throughout.

Prognosis. Vol. II, by Various Authors. Published by the *Lancet*, Ltd. *Price* 10*s*. 6*d*.

THESE series of essays on Prognosis represent the views of one hundred and twenty-three authors on as many subjects. The *Lancet* is to be congratulated on having collected such a varied and authoritative series of opinions on such an important branch of medicine. The subjects range from Breech Presentation to Manic-Depressive Psychoses, and the authors represent a fair cross-section of the best which British Medicine can offer.

Prognosis is the ultimate refinement in the art of medicine, for it demands not only a thorough understanding of the pathological processes at work, but a knowledge of how the species in general react to these processes, and more especially how one particular member of that species will react. Thus to make a good prognostician one should have, apart from a sound general knowledge

of medicine, years of experience in following up cases and seeing what becomes of them. The general practitioner should therefore make the most accurate prognoses, for he is enabled to study his patients from the cradle onwards and note their individual capacities to withstand ill-health.

For those of us who have had neither the time nor the experience to develop that almost uncanny faculty for accurate forecasts which some of our elders possess, it will be of inestimable value to have at hand a book containing the opinions of our leading experts on the prognoses of a wide variety of medical subjects. The editor of the *Lancet* has wisely asked each of the authors to choose his own subject, and each has dealt only with a pathology about which he felt he had something of special interest to contribute, based either on a wide experience or on special study.

The field covered, though wide, is far from exhaustive, and it is to be hoped that we shall see many more of these admirable volumes published.

P. W. C.

As I was going down Sackville Street. By OLIVER ST. JOHN GOGARTY. Published by Messrs. Rich & Cowan. Pp. 330. *Price* 15*s.*

THIS is a strange, wild book; there is depth and breadth in it, and a great vitality; and a great deal more besides, which might make one wonder, if one were likely to wonder about such a thing at all, how it may be received in the circulating libraries at Tunbridge Wells. And it is written by a man with a strange, wild name, which, on its second repetition, sends its alchaic metre capering rhythmically through the brain.

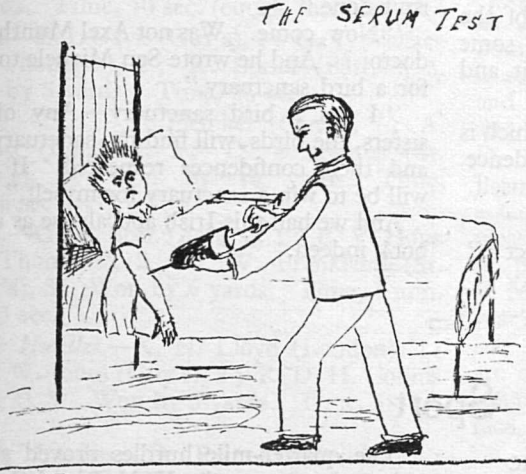
Mr. Oliver St. John Gogarty, an ear, nose and throat surgeon of repute, poet, playwright and politician (and perhaps one should have put poet first), tells of the years in Dublin. One supposes that there are many Dublins, as there are many Londons, and the brilliant facet that one sees through Mr. Gogarty's eyes strikes strangely on the tourist who knows that grey, dreary city, with its litter of newspapers and horse-dung, only as a milestone on the journey to the West; and strangely on the student midwife who, by the light of the spirit lamp, has watched the pangs of labour in forlorn streets that seem so far from the Rotunda. But the book shows, and brilliantly indeed, the life of a clique in Dublin and its progress from youth to age, and, more than that, it shows a background of Irish thought and conduct, of conflicting Irish feeling, woven in a way so that Grafton Street and St. Stephen's Green abut almost on dirty back-alleys edging the Liffey, and that brothels are within hail of Merrion Square.

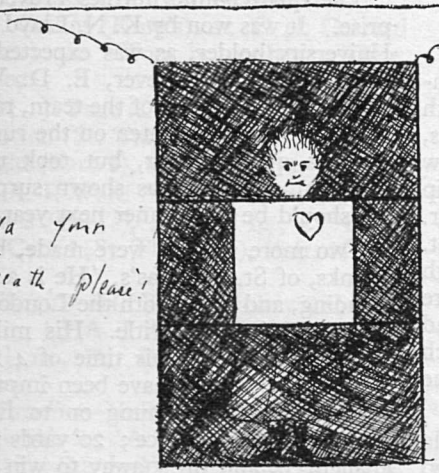
In the foreground there are great figures—Michael Collins, Tim Healy, Arthur Griffiths, Æ. Yeats, Augustus John, George Moore, James Joyce, Lord Dunsany, Sir Austen Chamberlain—and behind them are the Wicklow Hills, and the greenness of County Kildare, and beyond Athlone and Galway and over the Twelve Pins of Beoghal lies the end of Europe—the brown, grey-green mystery of Connemara.

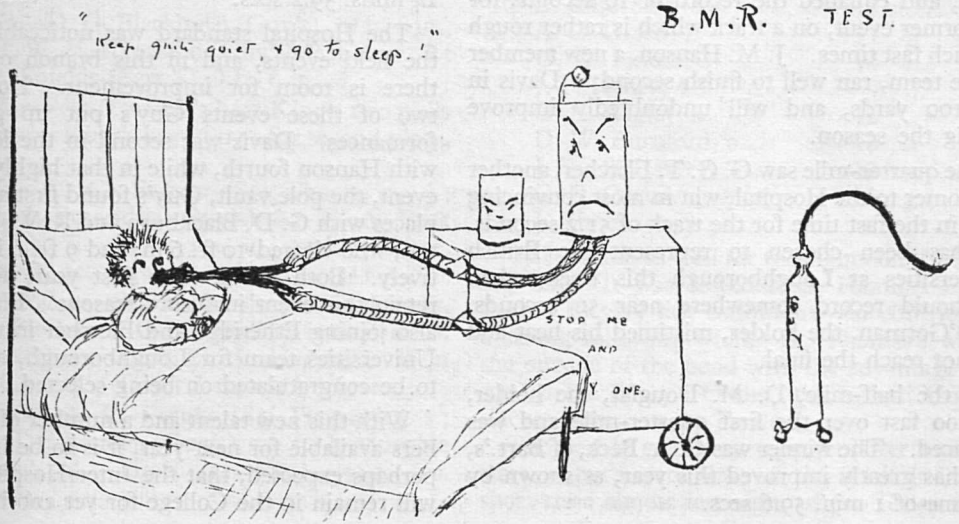
And Mr. Gogarty, in weaving together the astounding theme, stands virilely before us, yet never parades. An introvert, with a taste for adventure and a capacity for meeting the situation, he has stridden with vitality through medicine, literature and politics, from being born in a caul to become a surgeon and a senator. This is a full-blooded man; he loves well, hates well, drinks well, and after these most important, elemental things, we note that he lives well, and talks, perhaps, best of all. And with these essential attributes, together with his erudition, his feeling for literature and his carelessness of sock-suspenders, the author carries us with him on a tide of good feeling, of fellowship amounting almost to abandon. So through the pages Mr. Gogarty, enthusiastic, amused, enraged, ironic, humorous, witty by turns, now enchanted, now resigned, now bitter but brilliant, cavorts before us; always a talker, often a doctor, sometimes a leprechaun, he shows the whole spectrum of the mind from the red of the realist to the violet of the mystic, only the colours at the violet end are less well defined.

It is an impressionist picture that he gives us. There is no apparent chronological relation in the history, and yet the chronology is subtly worked out; at the end the thing hangs together in an amazing way, that one could not have suspected when too close to it at first. It is impressionist prose, reminiscent of Meredith, Joyce, Virginia Woolf. As in Joyce there is dependence on ellipsis and allusion (the illiterate miss much, and the literate perhaps not a little), as in Meredith the mind is kept moving to keep up with the pace. As in Virginia Woolf, there is used a restraint, so that the train of thought is started but not finished, leaving one looking, as one passes, down great corridors in the labyrinth of the mind nor seeing the end as one goes. As a style it is economical and succinct, and yet with extravagances to suit the story. The meeting with Augustus John in Chelsea is told with a beautiful economy. Nothing could exceed the natural exquisiteness (or should one say "exquisite naturalness"?) of its ending. "... My philosophy was quite a success. Quite! 'Be careful. Two steps!' ... 'Are you?' 'Yes! Yes! Quite all right, thanks!

A PATIENT'S DREAM; OR A DAY OF MODERN DIAGNOSIS







There are all these taxis, you know!' 'Good-night, old man!' 'Good-night, sweet Prince!'"

There are passages, too, of a lyrical beauty, and much laughter, and some terrifying tales of the trouble; and some amazing reminiscence, some preposterous conversations, some brilliant wit, and perhaps a very little that is dull.

Here at last we have a book by a doctor which is no cheap exploitation of professional confidence. The legendary Mr. Gogarty has revealed himself.

"We must have your book."

"What kind of a book and on what subject?"

"Why, the whole show. . . . All your memoirs."

"Alas, a medical man has no memoirs. It isn't done."

"Now, come. Was not Axel Munthe a medical doctor? And he wrote San Michele to get money for a bird sanctuary."

"I am a bird sanctuary. Any of my little sisters, the birds, will find my sanctuary inviolable and their confidences respected. If I write it will be to win a sanctuary for myself."

And we hail this Irish apocalypse as a very good book indeed.

M. P.

Sport

The 66th Inter-Hospitals Athletic Championships

THE 66th Inter-Hospitals Athletic Championships were held on Wednesday, 26th May, at the Duke of York's Headquarters, Chelsea, when Guy's followed up their narrow defeat in the University of London Championship by winning this contest for the third successive year. The final scores were: Guy's, 44 points; St. Thomas's, 36 points; Bart.'s, 34 points. Although the margin was not great the total points compare excellently with 45 in 1936 and 43 in 1937, and the Club is to be congratulated on maintaining such form over a period when competition is on the upgrade.

E. I. Davis was conspicuous in the sprints. He retained his title in the 100 yards and in the 220 yards, and equalled the record of 10 seconds for the former event, on a track which is rather rough for such fast times. J. M. Hanson, a new member of the team, ran well to finish second to Davis in the 100 yards, and will undoubtedly improve during the season.

The quarter-mile saw G. G. T. Fletcher, another newcomer to the Hospital, win in most convincing style in the fast time for the track of 51.2 seconds. He has been chosen to represent the British Universities at Loughborough this week, when he should record somewhere near 50 seconds. G. O'Gorman, the holder, mistimed his heat and did not reach the final.

In the half-mile, D. M. Douglas, the holder, ran too fast over the first quarter-mile and was unplaced. The winner was G. A. Beck, of Bart.'s, who has greatly improved this year, as shown by his time of 1 min. 59.6 secs.

The quarter-mile hurdles proved a great surprise. It was won by K. N. Lloyd (London), the University holder, as was expected, in the good time of 58.8. However, E. D. W. Jones, yet another new member of the team, ran an excellent race and was only beaten on the run in. Jones is really a quarter-miler, but took up hurdling a fortnight ago, and has shown surprising results. He should be the winner next year.

Two more records were made, both by A. C. Franks, of St. Thomas's. He is a miler of some standing, and holds both the London title and the British Universities title. His mile was run in the rain, otherwise his time of 4 mins. 28 secs. would undoubtedly have been improved. In the three miles Franks hung on to Etheridge, who went out at a fast pace; 20 yards from home he challenged, and drew away to win by 2 yards in 14 mins. 59.2 secs.

The Hospital standard was noticeably poor in the field events, and in this branch of athletics there is room for improvement. However, in two of these events Guy's put up good performances. Davis was second in the long jump, with Hanson fourth, while in that highly technical event, the pole vault, Guy's found first and second places with G. D. Blackburn and R. W. V. Kynaston, who cleared 10 ft. 6 in. and 9 ft. 6 in. respectively. Both are in their first year, and should retain this event in future seasons. Blackburn is also joining Etheridge and Fletcher in the British Universities team for Loughborough, and all are to be congratulated on being selected.

With this new talent and a number of old members available for next year, it is to be hoped, and perhaps expected, that the Inter-Hospitals Shield will remain in the College for yet another year.

RESULTS

100 *Yards.*—E. I. Davis (Guy's), 1; J. H. Hanson (Guy's), 2; K. Butler (Bart.'s), 3. Won by 3 yards. Time, 10 sec. (equals record).

220 *Yards.*—E. I. Davis (Guy's), 1; G. T. Wallace (St. Thomas's), 2; K. Butler (Bart.'s), 3. Won by 5 yards. Time, 23 sec.

440 *Yards.*—G. T. T. Fletcher (Guy's), 1; A. Kagwa (London), 2; D. S. Foster (St. Mary's), 3. Won by 10 yards. Time, 51-1/5 sec.

Half-Mile.—G. A. Beck (Bart.'s), 1; E. V. Hope (St. Thomas's), 2; A. W. Frankland (St. Mary's), 3. Won by 6 yards. Time, 1 min. 59-3/5 sec.

440 *Yards Hurdles.*—K. N. Lloyd (London), 1; E. O. W. Jones (Guy's), 2; R. D. H. Collins (King's), 3. Won by 5 yards. Time, 58-4/5 sec.

120 *Yards Hurdles.*—D. Reinold (Bart.'s), 1; R. D. H. Collins (King's), 2; P. H. Garrard (Middlesex), 3. Won by inches. Time, 16-2/5 sec.

High Jump.—L. J. Page (London), 5 ft. 7½ in., 1; B. W. Powell (St. Thomas's), 5 ft. 4½ in., 2; D. Reinold (Bart.'s), 5 ft. 2½ in., 3.

Long Jump.—A. I. Ward (Bart.'s), 21 ft. 2 in., 1; E. I. Davis (Guy's), 20 ft. 4 in., 2; R. E. Bonham-Carter (St. Thomas's), 19 ft. 11½ in., 3.

Putting the Weight.—H. E. A. Moody (King's), 39 ft. 7 in., 1; A. J. Martin (St. Thomas's), 39 ft. 4½ in., 2; D. B. Fraser (Bart.'s), 34 ft. 7 in., 3.

Throwing the Javelin.—N. E. Stidolph (St. Mary's), 152 ft. 8 in., 1; A. R. P. Ellis (Bart.'s), 130 ft. 2 in., 2; J. Muller (King's), 126 ft. 3 in., 3.

Pole Vault.—D. G. Blackburn (Guy's), 10 ft. 6 in., 1; R. W. V. Kynaston (Guy's), 9 ft. 6 in., 2; N. P. Shields (Bart.'s), 9 ft. 6 in., 3.

Tug-of-War.—St. Thomas's beat King's two pulls to none. King's beat Guy's for second place, 2—0.

One Mile.—A. C. Franks (St. Thomas's), 1; A. E. J. Etheridge (Guy's), 2; G. A. Beck (Bart.'s), 3. Won by 50 yards. Time, 4 min. 28 sec. (record).

One Mile Relay.—St. Thomas's (A. C. Franks, J. S. Phillpotts, G. T. Wallace and J. R. B. Peckover), 1; Guy's, 2; St. Mary's, 3. Won by 20 yards. Time, 3 min. 44-4/5 sec.

Three Miles.—A. C. Franks (St. Thomas's), 1; A. E. J. Etheridge (Guy's), 2; C. I. Murphie (King's), 3. Time, 14 mins. 59.2 sec. (record).

The Boat Club

As usual, there was some difficulty during the Michaelmas term in getting a boat on the water at all. However, at our darkest hour, when half the Hospital crew had never been in a racing eight before, we received reinforcements and the number and experience of our members steadily increased to culminate in the arrival of D. W. Burnford some four weeks before the Inter-Hospitals' Regatta. With his help the crew achieved a unity and punch that made rowing a pleasure to reflect on, if something of a purgatory to perform. Owing to the sudden illness of F. M. Hayes, one of the most experienced of this year's arrivals, there was some difficulty at the last moment in completing the crew. Thanks are owing to A. C. Green, an old member, for stepping into the breach only a week before the race.

THE LIGHT FOUR'S RACE

Tuesday, May 3rd, the first day of the Regatta, opened with the light four's race from the Mile Post in, against St. Thomas's. The crew was that which had rowed at Henley the previous year.

After starting very gingerly for fear of catching a crab—it was the second outing of the year—the disappearance of St. Thomas's proved too much for their self-restraint, and they rowed a very energetic, if rather mismanaged race, to lose by two lengths to an impressive crew of Blues and Leanders, which went on to beat London in the final.

THE LIGHT EIGHT'S RACE

The crew consisted of the following :—

E. Roseveare (*bow*)	11	stone	4 lb.
A. C. Green, 2	11	,,	12 ,,
G. W. Pinder, 3	14	,,	2 ,,
J. P. Henry, 4	9	,,	13 ,,
G. S. Wigley, 5	12	,,	6 ,,
D. W. Burnford, 6	13	,,	6 ,,
J. W. S. Harvey, 7	12	,,	10 ,,
C. D. Cormac (*stroke*)	13	,,	1 ,,
J. Ritchie (*cox*)	8	,,	9 ,,

This promised well for the eights on the following day. It was rowed from Hammersmith to Putney in very fast conditions—an ebb tide with a strong following wind. St. Thomas's were on the outside of the bend with the advantage of the stream, St. Mary's in the middle, and Guy's, in slacker water, on the inside.

The eights got away together after a delayed start. Guy's were slow off the mark and after a short time almost lost sight of St. Thomas's and

St. Mary's, who went off to the other side of the river and had a race by themselves. Meanwhile Guy's were cutting across the shallows—a doubtful advantage in view of the slack water there. Stroke had the boat well in hand with a rating of about 34 to the minute. It was nicely together and there was good length, but it did not feel by any means pressed.

Arrived at the buoy, with the quarter-mile finishing straight to go and no advantage to be gained from position, the three crews found themselves abreast. In response to a "ten" Guy's increased their drive rather than rate of striking, and, rowing with creditable steadiness, passed the finish about one length ahead.

The achievement of this much-desired result was due to the hard work of the preceding months and to coolness and good oarsmanship on the actual occasion. The crew owed its success as much to its stroke for steadying and lengthening it during the race as to D. W. Burnford for inspiring it to emulate his leg drive during practice.

THE PAIR OARS RACE

D. W. Burnford and G. Wigley entered for the pairs on the previous day. They had been able to spend little time in practice for this difficult event, but they rowed extremely well against the London pair, A. J. Barrett and I. Jackson, the ultimate winners. After holding them for over half the course a little *contretemps* with a mudbank put an end to their opposition.

THE CLINKER FOUR RACE

The Clinker Four was stroked by F. A. Gresham, with E. D. Whiteley, 3; J. Bloom, 2; and P. A. Peters *bow*. All had been rowing in the eight until Easter. In the first round they beat St. Mary's soundly, paddling in with two lengths to spare, and then repeated their victory against a more experienced crew from St. Thomas's on the following day. An excellent performance, especially as they had had little time to train.

SENIOR SCULLS

Roseveare entered for the senior sculls on the previous day. He was unfortunate in rowing soon after the light fours race, and was beaten by two lengths by A. J. Barrett, the ultimate winner.

JUNIOR SCULLS

Lots were cast and J. P. Henry was selected for the Junior Sculls, immediately following the eights. He was able to keep his opponent from St. Thomas's engaged, and was beaten by two lengths after a good race.

After the Regatta was over Mrs. Davies-Colley very kindly distributed the prizes. The gratitude of the Boat Club is also owing to C. R. Tilley, for his effective coaching during the earlier months just when it was most needed.

The results of the Regatta were very encouraging, both from the aspect of Hospital rowing as a whole —the standard was higher and the entry better than ever before—and from that of the Club. It is to be hoped that it will not rest on its oars, but that, in accordance with what is rapidly becoming tradition for the winner of the eights, it will send a representative crew to Henley.

Swimming Club

ON Saturday, the 8th of May, the Club had a Swimming and Water Polo match with St. Paul's School, spending a very enjoyable afternoon there. The School held us very well in the swimming events, especially considering that they had only been back at school for one week from the Easter vacation.

Powell, of Guy's, swam very well indeed to win the 100 yards, his knowledge of the new A.S.A. start no doubt helping him to get a lead which he slowly increased on all three lengths.

The 50 yards was a great race, and the judges must have had some difficulty in deciding how each swimmer was placed, all four finishing almost together.

The diving went, without a doubt, to the School, as we are very hard up for a good diver; there are facilities of a sort at Lavington Street Baths for anyone who is keen on this branch of aquatic sport.

The relay race, six a-side, each swimming one length, was a fairly easy victory for the Hospital, each man doing his bit to increase the lead. McCall, swimming last, was badly handicapped by an injured hand, but got home safely. By now the Hospital was leading the School by 18 points to 16, and the polo match, which we won by six goals to three, gave us a final score of 23 points to Guy's, and 16 points to St. Paul's.

The Hospital pressed fairly hard in the first half and scored four goals quite easily, the School suffering from lack of experience, though not from lack of vigour; they fought hard all the time, but our shots were too accurate and strong.

In the second half, Guy's eased up somewhat, after beating the goalkeeper twice more, but were not a little surprised when St. Paul's made a splendid effort and scored three goals, two in quick succession.

S. P. Vorster (3), Powell (2) and A. J. Drew (1) scored for Guy's.

After the match we all adjourned to a set-to tea in the School, which proved a very pleasant end to a no less enjoyable afternoon's swimming, for which we must thank those responsible at St. Paul's.

The following represented the Hospital:—Messrs. Crone, Drew, Horan, McCall (capt.), Powell, Roneletti, Titford, Weston and Vorster.

K. R. T.

Cricket

GUY'S v. NORBURY C.C.

THIS match, on Saturday, May 22nd, was played under dismal conditions, a continuous drizzle falling throughout the game. Our opponents batted first, and lost six wickets for 71, but a good stand for the seventh wicket enabled them to declare at 134.

Leeming and O'Gorman gave us a moderate start, but after the former was out, we lost three of our wickets for 11 runs, and any chance of forcing a win was lost. Foster and Morey batted well during the last 45 minutes, and the end came with Guy's requiring 40 runs to win with four wickets to fall.

Scores.—Norbury, 134 for 6 declared (J. Rafter, 53 not out).

Guy's

J. A. Leeming, b. Adamthwaite	22
G. O'Gorman, b. Rafter	10
L. G. Morey, not out	24
O. G. Lane, b. Rafter	1
P. H. Birks, b. Adamthwaite	1
H. Browne, b. Rafter	4
H. D. Foster, b. Adamthwaite	26
T. Woolridge, not out	2
Extras	4
Total for 6 wickets	94

H. A. Thomas, A. L. Young and S. E. Coffey did not bat.

GUY'S v. THREE COUNTIES HOSPITAL

A WEAK and unfamiliar team turned out on Wednesday, May 26th, against the strong Three Counties side, and were dismissed for 105 against some very good bowling.

We lost Leeming and Lane for five, but Roden maintained a stout and passive resistance while Morey scored 30 runs, the third wicket falling at 44. Birks then helped Morey to add 40 more runs, the latter doing all the scoring. Morey was eventually out, having made 59 out of 84 in an hour and 20 minutes. This was the Captain at his very best and a really great innings.

The remaining wickets fell in 15 minutes for the addition of 20 runs, which was not nearly enough, as our bowling was weak to say the least, only Morey and McLintock, and a promising new bowler, Leeming, could be called bowlers at all. However, having captured two of our opponents' wickets for 34, the rain descended and a flood covered the ground, no further play being possible.

Scores.—Three Counties Hospital, 34 for 2 wickets.

Guy's

J. A. Leeming, b. Callingham	3
L. G. Morey, c. Page, b. Callingham	59
O. G. Lane, s. Page, b. Hayward	0
W. H. Roden, b. Watts	4
P. H. Birks, l.b.w., b. Robinson	14
D. Plowman, l.b.w., b. Callingham	0
A. M. Platt, b. Robinson	11
H. Eustace, b. Robinson	0
T. Woolridge, b. Robinson	1
H. A. Thomas, b. Callingham	3
C. L. T. McLintock, not out	2
Extras	7
Total	105

Hospital Information, etc.

Notices

ASCOT CAR PARK

Last year Sir Arthur Hurst very kindly offered the use of his grounds as a Car Park for Guy's during Ascot Week, as a result of which the sum of £49 was collected.

He has again placed these facilities at the disposal of the Hospital, and the following paragraph has appeared in *The Times* and the *Daily Telegraph*:—

"ASCOT.—Park your car at private house overlooking course on Windsor-Ascot Road. 5*s*. a day. All proceeds to Guy's Hospital. Apply—Appeal Secretary."

GUY'S HOSPITAL DENTAL SCHOOL DENTAL TRAVELLING SCHOLARSHIP

A Scholarship enabling the holder to take out a course of at least six months' practical work in Dental Surgery at one or more Colonial or Foreign Dental Schools will be awarded in July, 1937. The value of the Scholarship is £250, and the Scholar will not be required to proceed abroad until September, 1937. Further details may be obtained from the Medical School Office.

Applications for the Scholarship should be lodged with the Dean, in the Medical School Office, on or before June 30th.

T. B. JOHNSTON, *Dean.*

NORTH-WESTERN UNIVERSITY DENTAL SCHOOL, CHICAGO, U.S.A., SCHOLARSHIP

A Scholarship is offered to a graduate of Guy's Hospital Dental School, on the nomination of the Dental Council, at the North-Western University Dental School, Chicago, as from September 1st, 1937. Details of the Scholarship may be obtained from the Medical School Office.

Applications for nominations should be lodged with the Dean, Guy's Hospital Dental School, London Bridge, S.E.1, not later than June 30th, 1937.

T. B. JOHNSTON, *Dean.*

HALF-TIME ASSISTANT TO THE DIRECTOR OF THE DENTAL PROSTHETIC LABORATORY

Applications are invited for the post of Half-time Assistant to the Director of the Dental Prosthetic Laboratory. The appointment will be for the period September 1st, 1937, to September 30th, 1938, in the first instance, and will thereafter be an annual one. The Assistant will be required to attend on six mornings per week, and the salary will be at the rate of £300 per annum.

Applications should be lodged with the Dean, in the Medical School Office, on or before June 14th.

T. B. JOHNSTON, *Dean.*

GUY'S HOSPITAL MEDICAL SCHOOL SCHOLARSHIPS IN ARTS AND SCIENCE

The following Award has been made for 1937 :—

Entrance Scholarship in Science of the Value of £100—Peter Leslie Masters, Alleyn's School, Dulwich.

Entrance Scholarships in Arts of the Value of £100—No Award.

T. B. JOHNSTON, *Dean.*

GUY'S HOSPITAL DENTAL SCHOOL SCHOLARSHIPS IN ARTS AND SCIENCE

The following Award has been made for 1937 :—

Entrance Scholarship in Science (of the Value of £40 per annum for four years)—Thomas Arthur Morris, Manchester Grammar School.

War Memorial Scholarship in Arts (of the Value of £40 per annum for four years)—No Award.

T. B. JOHNSTON, *Dean.*

Pass List

UNIVERSITY OF CAMBRIDGE.

The Degree of Doctor of Medicine has been conferred on

C. Astley Clarke

HIGHER DENTAL DIPLOMA (H.D.D.) GLASGOW

E. J. Dalling, L.D.S., R.C.S.Eng.

Papers by Guy's Men

C. P. Symonds and Another. Compression of the spinal cord in the neighbourhood of the foramen magnum. *Brain*, 1937, lx, 52.

C. Worster Drought and Others. Multiple Meningeal and perineural tumours with analogous changes in the glia and ependyma (neurofibroblastomatosis). *Ibid.*, 85.

D. W. C. Northfield and Another. The cortical projection of the pulvinar in the Macaque monkey. *Ibid.*, 126.

W. A. Mill. Basal-celled carcinoma of the palate. *Proc. Roy. Soc. Med.*, 1937, xxx, 922 (Sect. Laryngol.).

D. E. Denny-Brown. Mild eunuchoid giantism. *Proc. Roy. Soc. Med.*, 1937, xxx, 857. (Sect. Neurol.).

M. J. McArdle. Wilson's disease with Kayser-Fleischer ring. *Ibid.*, 858.

R. V. Havard and Another. Chemiotherapy of streptococcal infections with p.-benzylamino-benzene-sulphonamide. *Lancet*, 1937, i, 1273.

A. H. Harkness. Infections of the bulbo-urethral glands of Cowper. *Brit. J. Ven. Dis.*, 1937, xiii, 119.

E. P. Poulton. An inexpensive flow meter and humidifier for administering oxygen. *Brit. Med. Jour.*, 1937, i, 1113.

G. Ellis. Kallodent. *Brit. Dent. Jour.*, 1937, lxii, 523.

Changes of Address

C. H. Greaves, L.D.S., 98, Charing Cross Road, W.C.2. *Temple Bar* 3926.

G. B. Ebbage, Moat Farm, Wrotham, Kent. *Borough Green* 256.

Births

AMSDEN.—On May 12th, 1937, at Nuffield House, to Joan (née Smith), wife of Flight-Lieutenant A. S. Amsden, of Aircraft Depot, Hinaidi, Iraq—twin boys.

Marriage

GORTON—TOOKEY.—On May 22nd, 1937, at St. George's Church, Bickley, Albert Gorton, L.D.S., R.C.S.Eng., son of Capt. and Mrs. G. P. Gorton, of Minehampton, to Barbara Eleanor Tookey, daughter of Mr. and Mrs. N. Tookey, of Bickley, Kent.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

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PASSIM

WHEN the giant Armada of Philip of Spain was sighted off Plymouth, it is said that Sir Francis Drake was playing bowls, and, so intent was he upon this ancient and interesting game, that he refused to be disturbed by all the might of the Spanish Navy (as also did our friend Potato Jones much more recently), and insisted on finishing the match. That was in 1588. We played our first game last week, and, though no one could say that the fate of England was in the balance that day, we found the game thrilling enough and far more difficult than we had ever imagined.

Our match was between a team representing the Yeoman Warders of the Tower of London and a team gathered from all the better-known departments of this Hospital, and took place upon a green no less historic than Plymouth Hoe, for we played in the moat of the Tower, and but a stone's throw from the spot where the poor little princes met their untimely death. It is true that we were not able to gaze out upon the English Channel and watch the enemies of England draw nearer, but we did see the Royal Eagle disgorge some pleasant, if noisy, folk from Margate, and in the distance, across the Pool, lay a ship that once took us ten times as far, so that we felt that Sir Francis Drake, though no doubt a much more competent performer than we shall ever be, could hardly have played the game in a setting dipped deeper in tradition than we did upon that memorable evening.

To attempt to give an account of the game would bore you, patient readers, more than we ever dare, but let it be said that the result was never in doubt, and, but for the timely intervention of Providence to balance the bias in some of our worst shots, we would have lost by an even greater margin than we did, but it was a most enjoyable evening, and we are most grateful to our genial hosts, the Warders, for their hospitality.

Later in the evening we watched the ritual of the Keys, or the solemn and sinister ceremony by which the Tower is locked up for the night, and the Crown Jewels put away from the prying gaze of the public until to-morrow. An age-old custom, and one which has several strange regulations as to its performance; perhaps the most interesting of these being the warning to the guard not to let any "big fat-bellied women" linger near the ceremony, but there is yet another, cruder still, a warning which may be seen on many a garden wall, but upon which we need enlarge no further here. Needless to say, both these regulations were complied with—at least, we saw no signs of fat-bellied women or of any misbehaviour, but merely stood, impressed with a vast admiration for the soldier-like bearing of the Chief Yeoman Warder, who, at the age of seventy-four, still marches nightly with the guards. Mr. Smoker was once a patient in the Hospital, and, if we may say so, looks just twenty years younger than he is. We hope that this illusion will be permanent, and feel that the priceless jewels of our Crown could be in no safer keeping.

▭

THERE is no part of the Hospital that has received greater attention in the way of alterations lately than the landings in the Medical Block, and for anyone who has not been in this building for a while, the landing separating Victoria from Addison must present an extraordinary change.

For, not only has a telephone been provided—admittedly one that is useless after five o'clock in the afternoon, but nevertheless a real telephone—but a kind of lobby or retreat has been formed by the erection of a large wooden screen stretching from the lift right across to Victoria, or thereabouts.

Within this screen there is an expanse of straw matting, a comfortable settee and a small table, set beneath the bewhiskered bust of some former giant, while, forming a kind of south transept, is

a small and useful room, of a kind which is commonly found adjacent to a bathroom. In all, a great improvement on the cold bare stone, but, as yet, we have not been told the reason for this sudden splendour. Probably it is for the visitors, and not, as has been suggested, for those House Officers patiently awaiting the emergence of the Night Sister from their wards, but, whatever it is for, we have seen some strange sights upon that table. Once a lonely soda siphon languished with a glass, and then, much strange still, a breakfast neatly laid for two appeared with a sparrow, not long dead, upon a plate. But what should prove more refreshing still in the cold winter months, will be the draught that must come whistling under that screen, and which might, we think, considerably offset some of the other comfort provided.

IT is now six months since we published any news of the Guy's Hospital Appeal and how it was progressing. To remedy this defect we hope in the next issue to be able to give full figures for the first half of this year with details of costs, etc. In the meantime it will be of interest to note that the grand cash total to date which has been received is £114,093 18*s.* 3*d.*, an advance of approximately £37,000 since January 1st. These figures do not include sums promised, conditional approximately £37,000 since January 1st. These or otherwise, which, added to the cash received, bring the grand total to very nearly £200,000.

WITH great regret we record the retirement of Mr. F. J. Fenn, a Director of Messrs. Ash & Co., who has been concerned with the printing of this paper for nearly forty years, but who has lately suffered a severe breakdown in health, and has been forced to give up his work.

There are very few subjects of which we may claim an expert knowledge, but we have begun to realise something of the difficulties of a printer, and often marvel at the ease and efficiency with which the tangled mass of our material is transformed into a *Gazette*—as, no doubt, others do too. But Mr. Fenn was a past master at this delicate task, and, during his years with Ash & Co., he must have earned the gratitude of a host of Editors and have read "Passim" more than a thousand times.

For ourselves, we are very sorry that Mr. Fenn has had to retire, and hope that his health will take a marked turn for the better now that he is no longer worried by the lateness of our copy. We would like to take this opportunity of expressing to Mr. Fenn our sincerest thanks for his most valuable services on behalf of the paper.

SOME time ago we published a letter remarking on the habit of present-day nurses of suffixing the word "dear" to every sentence that they address to a patient, and suggesting that it might be more desirable to make use of the patient's name when it is necessary to address them directly.

Now, as may sometimes be evident, we do not always agree with the opinions of correspondents, but this particular letter seemed to us to be sensible enough, and we have often listened with some amazement to the frequency with which the word "dear" occurs in the remarks made by nurses to patients. However, to be fair, it must be said that the Nursing Staff are by no means the only offenders, and the habit seems to us more nauseating still when it is heard among men.

To some patients, to be addressed as "dear" by someone half their age must seem unpardonably familiar, to others it may sound just ridiculous; but we share the views of our correspondent, and would make a plea for a more liberal use of names.

Our correspondent will, we hope, feel duly gratified by the fact that this letter was commented on favourably in our distinguished contemporary, the *Nursing Times*, which confessed to being vastly amused. Dear, dear, where will this end?

Obituary

DR. WILLIAM LINDSEY CHUBB

WILLIAM LINDSEY CHUBB, M.B.E., M.D., M.R.C.S., L.R.C.P., who died on May 31st at 7, Pitt Street, W.8, was the eldest son of Dr. Charles Chubb, of Torpoint, Cornwall. He was born in 1856 and came to Guy's Hospital as a student in 1873, in the days when operations were performed only on two afternoons of the week. He was subsequently in practice at Sandgate, Kent, and from 1906 to 1919 at Farnborough, Hants. In 1888 he married Isabel Margaret Pringle (daughter of the Rev. A. D. Pringle, of Blakeney, Gloucestershire), who died in 1927. They had one son, who was killed in France in 1916, and two daughters.

Dr. Chubb retired from practice in 1919, but always kept the warmest interest in his old Hospital and in the *Gazette*.

His sound judgment and devoted care of his patients, his loyalty to colleagues, his quiet strength and thoughtfulness for others, his cheerfulness and ready sense of humour brought him the love and trust of all who knew him.

It was with characteristic serenity that he accepted the enforced inactivity of his last five years.

Prostatic Obstruction

A Clinical Lecture by W. D. Doherty, Esq., M.Ch., F.R.C.S.

GENTLEMEN,—The prostatic gland is situated at the base of the bladder and surrounds the first portion of the urethra. The gland is prone to certain types of enlargement, and it is not unnatural that such enlargement may produce obstruction to the outflow of urine from the bladder.

I propose to consider these various enlargements and the effects they have on the urinary mechanism.

TYPES OF ENLARGEMENT

1. *Benign hypertrophy* of the prostate is the commonest cause of enlargement. It is a disease of elderly men and rarely gives rise to symptoms before the age of 60. Normally the prostate should atrophy with advancing years, but in about 30 per cent. of men over 60, hypertrophy rather than atrophy occurs. The hypertrophy is not necessarily of sufficient extent to give rise to obstructive symptoms, and, in fact, only about half this number develop obstruction.

2. *Simple adenoma* of the prostate is another cause of enlargement, and it is difficult to differentiate it from benign hypertrophy. The age of onset and symptoms are almost identical.

3. *Carcinoma* of the prostate is a fairly common cause of enlargement; 15-20 per cent. of enlargements giving rise to symptoms are found to be carcinomatous.

4. *Inflammation* of the prostate. This may occur in an acute or chronic form. There may be the formation of a prostatic abscess or an enlargement of the whole gland, due to inflammatory changes. In chronic inflammatory conditions stones are liable to form in the gland.

RESULTS OF ENLARGEMENT

Any one of these types of enlargement, as it progresses, produces obstruction to the outflow of urine from the bladder. Nature's reaction to this state of affairs is the same as it is to obstructive conditions in any other part of the body. The muscles of the bladder wall begin to hypertrophy in order to force the urine past the obstruction. If the obstruction is a progressive one, and it generally is, there comes a time when the bladder muscle will hypertrophy no more and the bladder is either unable to empty itself at all, the condition known as acute retention of urine, or only partially empties itself. This latter state is known as a chronic retention, and the amount of retained urine, after a normal act of micturition, is called the *residual urine*. A similar sequence of events may be seen occurring in other parts of the body whenever an obstruction occurs. Compare a stenosed valve between two chambers in the heart; the heart muscle hypertrophies and forces the blood through the stenosed valve. We then speak of a compensated valvular lesion of the heart, but there may come a time when the heart muscle is no longer strong enough to force the blood through the valve; the heart dilates and the patient will show symptoms of heart failure. Similarly, we may speak of a compensated bladder and a failing bladder with residual urine. There are other and more serious effects of obstruction than those on the bladder itself.

The hypertrophy of the bladder muscle tends to obstruct the free flow of urine into the bladder and, as the bladder fails to empty itself, so the kidneys are secreting against a constant pressure in the bladder, and they in turn begin to dilate, producing a condition of hydronephrosis and failing function. The resistance of the urinary tract, under these conditions, is considerably lowered and infection is very liable to occur. The ultimate result, therefore, of prostatic obstruction is renal failure and consequent uræmia.

SYMPTOMS AND SIGNS OF ENLARGEMENT

The first symptom of prostatic enlargement is nearly always frequency of micturition, this probably being caused by the pressure of the enlarged prostate on the bladder base. This frequency is usually more noticeable during the night than in the day. Next a certain hesitancy in starting the act of micturition; later, it will be noticed that the urinary stream is not ejected with much force, and there is some dribbling after the act is finished. These symptoms may be quite insidious in onset, and the patient may not take much notice of them until something more serious occurs which makes him consult his doctor. This may be an attack of hæmaturia, due to rupture of one of the congested veins overlying the prostate; or an attack of acute retention of urine.

On the other hand, chronic retention and an increasing residual urine may progress unnoticed, so that the patient may consult his dotcor because of gradually failing health and be found, on examination, to be suffering from renal failure and commencing uræmia.

The physical signs will vary with the stage of the disease. In the early stages there may be very few physical signs, perhaps slight prostatic enlargement, to be found on rectal examination. This, taken in conjunction with the history, will suggest the diagnosis, which can be confirmed by cystoscopic examination and by measurement of the residual urine.

A normal bladder should completely empty itself at each act of micturition. If, then, a patient be catheterised immediately after the act and be found to have 4 or 5 ounces or more of urine in the bladder, this is evidence of obstruction. Later, of course, on examination the bladder may be palpable above the symphysis pubis after micturition, and may even be seen as a large lower abdominal tumour if there is a great amount of residual urine. A cystoscopy will reveal hypertrophy of the musculature of the bladder, a characteristic trabeculation is seen with little pockets between the trabeculæ. Intravesical enlargement of the gland will also be noticed with the cystoscope.

DIFFERENTIAL DIAGNOSIS

The hypertrophied prostate is generally felt per rectum as a smooth, symmetrical enlargement, which is elastic to the touch. There is no fixation, and the mucous membrane of the rectum moves easily over it. The adenomatous prostate tends to give an asymmetrical enlargement which may be noticeable per rectum or with the cystoscope, but the enlargement is always smooth and soft.

The characteristic feel of the carcinomatous prostate is "stony hardness," as is carcinoma elsewhere in the body. This may be felt throughout the whole gland, or there may be a single very hard nodule to be felt in an otherwise soft gland. Later, undue fixation of the gland to its surroundings may be noticed.

Acute and chronic prostatitis may be difficult to recognise, but there may be a long history of recurrent attacks of frequency and pyuria often associated with low pyrexia, and one may obtain an old history of gonococcal infection, although this is not necessarily a precursor. The diagnosis is often confirmed by collecting a urine specimen after gentle massage of the prostate. This empties the prostate of secretion and the latter may be found to contain numerous pus cells.

TREATMENT

Prostatic enlargement is, in most cases, a progressive condition. We have seen that in its later stages it causes failure of renal function. Up untill a few years ago there was only one recognised method of treating the condition. That was to wait until acute retention, or marked symptoms of chronic retention, occurred, and then enucleate the prostate by the digital method without any attempt to control hæmorrhage or visualise the prostatic bed after the enucleation. A large number of these cases were in the early stages of uræmia from failing renal function, and the shock of the operation was sufficient to cause a great increase in their uræmic symptoms and the mortality rate was high.

Prostatic enlargement should be treated as any other progressive surgical condition is treated. If a progressive obstruction in the bowel is diagnosed, one does not wait until an acute obstruction occurs. We know that operations at that stage have a very high mortality, and we make every effort to diagnose and treat them before the obstruction is complete. The methods of treating prostatic hypertrophy are as follows :—

1. *Prophylactic.*—Many years ago it was found that in castrated animals the prostate underwent atrophy. This operation was applied to man; the results were said to be excellent as regards the urinary system, but the general and psychological effects so alarming that the operation was abandoned. This experiment, however, suggested that the testicle contained some secretion which caused prostatic enlargement. Later, Steinach discovered that ligature of the vas on both sides succeeded in increasing the internal secretion of the testis by obstructing the external secretion. He claimed a rejuvenating effect and a decrease in prostatic symptoms. This would suggest that the testis contained another secretion which prevented prostatic hypertrophy.

It is now generally agreed that there are two or more separate hormones secreted by the testis. It has been suggested that the two main hormones are balanced, the one exerting an inhibitory influence upon the other.

With advancing years, in certain people, the male hormone secretion declines and allows the other hormone, the œstrogenic hormone, to exert an unnatural influence, which results in hypertrophy of the prostate. Any treatment, therefore, based on this supposition, which has considerable experimental support, must aim at restoring the balance between these two hormones, *i.e.*, increasing the secretion of the male hormone.

This may be attempted in several ways : (1) by isolating the hormone and giving it to the patient in some assimilable form ; (2) by preventing the external secretion of the testis in the hope that the hormone thus retained may be reabsorbed into the blood stream. Many attempts have been made to isolate a male hormone which has an

inhibitory effect on prostate hypertrophy, but, so far, no satisfactory clinical results have been obtained. More promising results have been obtained by retaining the external secretion of the testis.

The original operation was described by Steinach and consisted in ligature of the vas on either side. Although it had a rejuvenating effect, it often resulted in considerable congestion and pain in the epididymis, and the effects on prostatic enlargement were not convincing.

A new procedure was described by Niehans. Instead of ligaturing the vas, a ligature was placed round the efferent ducts of the testis where they joined the head of the epididymis. He claimed that, in this way, the external secretion was retained and the aforementioned complications were avoided. The operation was described as Steinach No. 2. He reported a series of 400 cases in which he had performed this operation with excellent clinical results.

Elliot Smith, in this country, recorded results in 20 unselected cases of acute or chronic obstruction treated by this operation. Thirteen of the cases appeared to have a satisfactory clinical result. These cases had only been watched over a period of 18 months, so that, knowing their tendency to fluctuation in symptoms, one must be careful in assessing the results.

Since these papers were published I have performed the operation on some twenty cases, but sufficient time has not elapsed to estimate its true value. From such results as I have, however, I would have no hesitation in advising any man with early symptoms of prostatic hypertrophy to undergo the operation. It is simple and of a minor nature, and, should no benefit result from it, is a useful preliminary to more radical procedures.

2. *Transurethral resection of the obstructing portion of the prostate by a diathermy cutting loop.*—This method is suitable for small intravesical projections of the prostate, for chronic inflammatory enlargement, and as a palliative measure in carcinoma. It has the advantage of avoiding open operation on the bladder, and therefore minimises shock and shortens convalescence. It is not, however, free from risk, and is dangerous in the presence of sepsis.

3. *Enucleation of the prostate either by the suprapubic or perineal route.*—The former method is most frequently practised. After the enucleation, suitable retractors are inserted and the prostatic bed visualised. Bleeding vessels are ligatured and sutures inserted so as to obliterate the space and hasten the epithelialisation of the cavity. In most cases it is necessary to drain the bladder by a suprapubic tube afterwards, but if satisfactory hæmostasis can be obtained the bladder may be closed.

In all these cases the choice of operation depends upon the nature of the enlargement and the renal function. A patient with incipient uræmia due to chronic obstruction will recover his renal function if his bladder be drained either by in dwelling catheter or suprapubic tube. This is a necessary preliminary to any operation in advanced cases.

Prontonsil in Erysipelas

Report of a Case by G. D. N. Milne, Esq., M.R.C.S., L.R.C.P.

R. H., a female, aged 20 years, was admitted to hospital in January, 1937. There was a history of intermittent discharge from the left ear for three years, with periodic exacerbations, during one of which, in 1936, a simple mastoid operation had been performed by Mr. T. B. Layton. The retroauricular wound closed satisfactorily, but the meatal discharge persisted, though reduced in amount. In December, 1936, there was, in association with an attack of influenza, a flare-up in the "mastoid" scar, a fluctuating swelling developing, being incised, and afterwards healing. Again in January, 1937, in association with a severe cold, a further flare-up occurred, but failed to heal after incision, a discharging sinus persisting.

This sinus was probed in an attempt to remove any foreign body which might be the cause of the persistent discharge.

The next day the temperature rose to 102° F. (see Fig. 1), and on the following day she had a rigor. A diagnosis of lateral sinus thrombosis (sinus phlebitis) was made, and verified at operation, the thrombus being evacuated and the sinus packed.

The temperature subsided but sixty hours later rose to 102.4° F., and in view of this the internal jugular vein was divided between ligatures through a transverse incision. The temperature fell, but not to normal and forty hours later shot up to 104.8° F., when a raised erythematous area with a few superimposed vesicles was discovered, spread over the whole of the left side of the face and the left auricle.

A diagnosis of erysipelas was made, and treatment with Prontosil was instituted. In order to

test the effect and rapidity of action of this drug an hourly chart of the temperature, pulse and respiration was kept (Fig. 2). One intramuscular

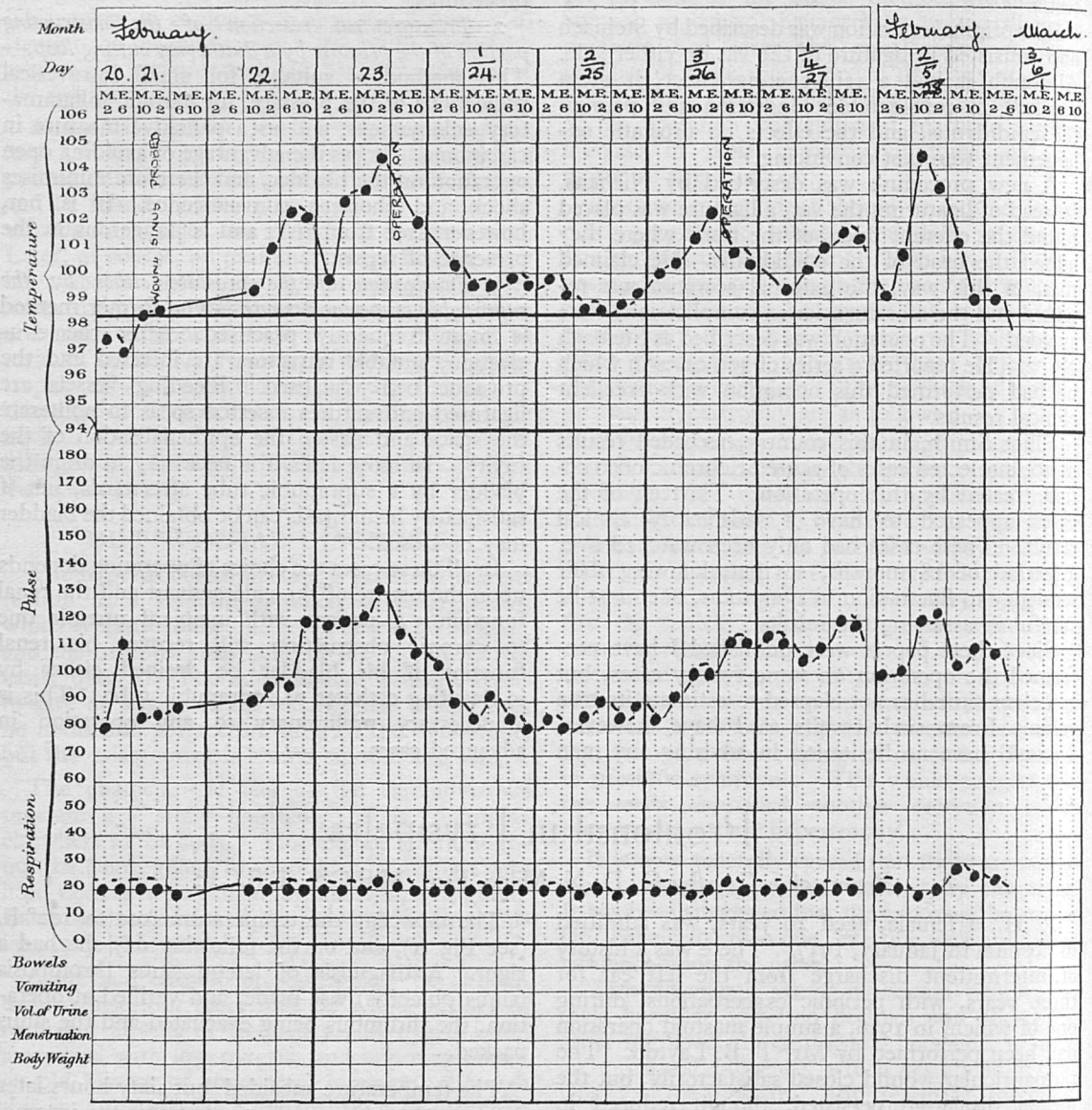


Fig. 1

injection of Prontosil 10 c.c. was given, followed six hours later by Prontosil Album one tablet four-hourly, administered by mouth.

The remarkable fall in temperature here recorded and the improvement in the local condition as witnessed by diminution of the erythema and almost complete disappearance of the œdema within the first twenty-four hours, are considered to be directly due to the action of Prontosil (administration of which was continued for ten days after the temperature had fallen to normal), combined with a liberal fluid intake (approximately 160 ounces in the twenty-four hours for several days).

The patient made an uninterrupted recovery and was discharged seventeen days after the exploration of the lateral sinus, the meatus, however, still discharging slightly.

Month
Day
Temperature
Pulse
Respiration
Bowels
Vomiting
Vol. of Urine
Menstruation
Body Weight
February
March
PRONTOSIL TABT

Fig. 2

The " latent interval " of Prontosil is here seen to be approximately six hours. A series of observations on cases of erysipelas and other diseases due to the hæmolytic streptococcus, with special reference to the " latent interval "—whether always present or not, and, if so, its approximate length, would be of interest, and might be of value in determining the mode of action of the drug, a problem which appears as yet to be imperfectly understood.

I wish to thank Mr. T. B. Layton for permission to publish this case.

Dietary Conditions in the Repair of Disturbances of the Liver

A Note upon the International Congress on Hepatic Insufficiency

THE fact that the functions of the liver are numerous and complex is fully accepted. At the outset this fact indicates the importance of the alimentary factor in the normal or pathological evolution of these functions.

Diet itself has an influence in determining certain hepatic disturbances. Abnormalities in the metabolism of various basic foods suffice to show the presence of functional abnormalities, and also permit their extent to be measured.

The problem of diet thus appears as of first importance in the correction of disturbances in the liver and likewise in the repair of this organ.

Among the conditions which must be borne in mind for establishing the diet in cases of insufficiency of the hepatic functions are the protein and carbohydrate metabolism, the transformation of fats and the metabolism of water and mineral substances.

Repair of the liver should, naturally, be preceded by arresting the injuries inflicted upon it. Hence the necessity of knowing the maximal degree of tolerance of a given food, in order to avoid exceeding the limits of the functional capacity of the hepatic cell.

This brief summary readily indicates the difficulties of ascertaining the dietary conditions which must be established in any given case. The clinical symptoms present do not always strictly correspond with coexisting types of functional insufficiency. These symptoms are numerous, irregular and of unequal significance.

In view of the fact that not one form, but many forms, of hepatic insufficiency may occur, no rigid dietary formula is possible. It is evident that the necessary modifications of the diet may be very numerous, and almost infinite in number.

For establishing the diet in hepatic conditions, a few general principles may usefully serve as guides. In such cases the reduction of proteins is basic and the limitation of fats is of extreme importance, while an increased sugar intake is necessary, and sometimes vitally imperative.

In spite of the particular preferences and idiosyncrasies of each case, a sort of common basis therefore exists, and there is a general minimal type of diet serving as guaranty.

However, only complete biological analysis is capable, in a given case, of indicating the dietary program which will insure complete repair of the abnormal and diseased liver.

This important question of the influence of the diet in hepatic repair will be discussed by Professor Gallart-Mones, Professor of Digestive Pathology at the Faculty of Medicine of Barcelona, at the International Congress on Hepatic Insufficiency, which will be held at Vichy, September 16th to 18th, 1937, under the patronage of the French Minister of Public Health and in which fifty-one countries will be represented.

Sport

ON Wednesday, May 19th, the President's Prize was competed for on the Sidcup Golf Links. The Scratch Prize was won by G. G. France. Other prize-winners were F. S. Buckler, R. Hudson-Evans, B. C. M. Reed, P. Wilson, D. E. Deverall and P. D. Spooner. The entry was very small owing to the vile weather.

On Thursday, May 27th, the Inter-Hospitals Spring Meeting was held at West Hill, and the Scratch Challenge Bowl was won by Bart.'s. Guy's were represented by B. C. M. Reed, I. Drybrough-Smith, R. D. Allen, G. G. France, J. C. Ritchie, P. Wilson, P. E. Deverall, K. S. MacLean and P. D. Spooner.

On Sunday, May 30th, Guy's were entertained by Littlehampton Golf Club, and were defeated by $3\frac{1}{2}$ to $4\frac{1}{2}$ matches. T. L. Clark did not turn up, and Guy's were assisted by R. K. Furneaux in the afternoon. Clive Armstrong, the home captain, had the honour of doing the 16th hole in one in the afternoon! Foursomes were played before lunch, and fourballs after lunch.

P. M. F. B.

Results were as follows :—

Littlehampton		*Guy's*	
Clive Armstrong and F. L. Huxtable	½	B. C. M. Reed and K. S. MacLean	½
G. Whiteman and A. G. Rivington (4 & 3)	1	A. L. Young and S. G. McCallin	0
F. S. Neate and J. H. Parry (4 & 3)	1	P. D. Spooner and J. Braithwaite	0
Major V. B. Rogers and M. H. Armstrong	0	C. L. Blacklock (3 & 1)	1

FOURBALLS

Clive Armstrong and F. L. Huxtable (5&4)	1	B. C. M. Reed and K. S. MacLean	0
George Whiteman and A. S. Rivington	0	A. K. Furneaux and A. L. Young (1 up)	1
F. S. Neate and J. H. Parry (3 & 4)	1	S. G. McCallin and P. D. Spooner	0
Major V. B. Rogers & M. H. Armstrong	0	J. Braithwaite and C. L. Blacklock (1 up)	1
Total	4½	Total	3½

Water Polo

ON Tuesday, May 18th, at the Fitzroy Baths, the Hospital beat University College Hospital, after a struggle, by 5 goals to 4. The first half was a very poor show from our point of view, and served as a good lesson to us not to take things too easily. The team was far from fit, and we did not play together, the marking being particularly bad. When the whistle blew for half-time we were three goals down, and had not netted the ball once.

We pulled ourselves together in the second half and, though marking was still not good, several movements started by the backs, A. M. McCall and C. Halamandres, produced three goals in fairly quick succession.

University College Hospital then pressed hard, and careless marking gave them their fourth goal. Guy's replied with two more well-placed goals from nice passing movements, so we won by five goals to four—rather a lucky win.

Team.—J. Crone; A. M. McCall; C. Halamandres; K. R. Titford; S. P. Vorster (2 goals); Morrell-Thomas (2 goals); T. Weston (1 goal).

The Hospital met a team from Customs and Excise Swimming Club at Lavington Street Baths on Monday, May 24th, and, though we managed to hold them over the swimming events, we were heavily defeated in the water polo match.

In the free-style and breast-and-back team races we swam quite well, winning the former and being narrowly beaten in the latter. In the 100 yards, A. M. Edwards swam a magnificent race to win by a touch, but in the 50 yards the new method of starting rather confused our entrants, who could not pick up what they lost through bad starts. The diving we lost, as the Customs and Excise first string was, we understand, a champion in his time, and Guy's still have no one who could ever claim to be reserve champion.

The water polo we lost by 8 goals to 2, our standard of play hardly justifying the two we did get. Only on very few occasions did Guy's produce any promising movements; our fault lying, as usual, in bad marking by forwards and backs alike, a fault we do not seem to be able to stamp out. The less said of this match the better.

Those representing the Hospital were :—

J. Crone; A. J. Drew; C. Halamandres; D. G. Moran; A. M. McCall; Powell; Ronchetti; K. R. Titford; S. P. Vorster; T. Weston.

Guy's played its second Inter-Hospitals League match on Tuesday, May 25th, against London Hospital. We pulled ourselves together in this match, the fact that close marking was not necessary helping us greatly.

The game was rough at times, but we nearly always had our own way, the backs being able to break away and swim up the bath on several occasions, providing the forwards with many chances to shoot. On this day the forwards did not let us down. Morrell-Thomas and T. Weston each beat the goalkeeper four times and Edwards, making up by positioning for what he lacked in ball control, netted once. It was altogether a satisfactory match and showed what the team can do when it gets down to the game.

The result, a win for Guy's by 9 goals to nil, was very encouraging for future League matches, but we still have our toughest nuts to crack—Bart.'s and St. Mary's.

Team.—J. Crone; A. M. McCall; C. Halamandres; K. R. Titford; T. Weston (4 goals); A. M. Edwards (1 goal); Morrell-Thomas (4 goals).

Cricket

GUY'S v. PRIVATE BANKS

GUY'S opened their season as usual with a match against the Private Banks on May 3rd. The Banks are a strong side, and it has long been our ambition to beat them, but once again we found them too good for us.

Morey won the toss and, batting first, Leeming and O'Gorman put on 40 for the first wicket, before Leeming was caught at the wicket. Morey

batted well for 23, when he was out to a very fine catch in the long field.

The opening batsmen had laid the foundations of a good score, but unfortunately the remainder of the side were sadly out of practice, and we lost our last eight wickets for 40 runs.

Our bowling was too bad to be true, and the Banks had little difficulty in knocking off the runs, to win by nine wickets. This was a disappointing result, but there is no cause for despondency. We have a definitely sound batting side, but lack a really hostile bowler. We would welcome a fast bowler.

Scores.—Private Banks, 135 for 2 (C. G. Howard, 62).

Guy's

1.	J. A. L. Leeming, c. Howard, b. Blessley	17
2.	G. O'Gorman, c. Blessley, b. Richards	26
3.	L. G. Morey, c. Tilburn, b. Richards	23
4.	O. G. Lane, b. Richards	1
5.	P. H. Birks, c. Howard, b. Black	11
6.	H. D. Foster, c. Tilburn, b. Richards	9
7.	A. C. C. Hughes, c. Richards, b. Black	8
8.	H. A. Thomas, c. Richards, b. Black	5
9.	R. M. de Gregory, c. Pitts, b. Black	3
10.	C. L. T. McClintock, c. Richards, b. Black	4
11.	F. W. Rushby, not out	0
	Extras	18
	Total	125

GUY'S v. THE WANDERERS

GUY'S met a strong Wanderers' side in their second match, and after a very enjoyable game lost by 60 runs in the last over of the day.

Our opponents batted first and compiled the useful total of 216. This ought to have been less, but there were one or two lapses in the field which proved expensive.

Morey and Coffey bowled well in the opening overs, the former frequently beating the bat, but without luck. The first wicket fell after 50 runs had been scored in rather laborious fashion. Two more wickets fell quickly, but after lunch the bowling was heavily punished, and the tail batsmen were allowed to make far too many runs.

O'Gorman took four wickets and bowled an occasional unplayable ball, but his command of length left something to be desired.

Guy's made a disastrous start, O'Gorman being bowled for one, Wooldridge was run out, and Eustace, a newcomer, after showing promising form, was out for six. Twelve for three meant an uphill fight, and Lane and Morey settled down to play some really good cricket, putting on 80 runs before Lane was out for an excellent 34. Morey went on to make a splendid 50, and it was a pity when he threw caution to the winds and played across a straight one and was l.b.w.

With Birks and Foster well set the game seemed in safe keeping, but Birks foolishly ran himself out and things looked serious again. Wickets fell steadily and Roden and Coffey, preferring brawn to brain, both lost their wickets in the last over, which must have been a great disappointment to McClintock, who was exercising a magnificent and natural discretion at the other end.

Scores.—The Wanderers, 216 (L. D. Lean, 44; G. O'Gorman, 4 for 64).

Guy's

1.	G. O'Gorman, b. Parker	1
2.	G. H. Eustace, b. Parker	6
3.	T. Wooldridge, run out	3
4.	L. G. Morey, l.b.w., b. Gadsby	51
5.	O. G. Lane, b. Gadsby	34
6.	P. H. Birks, run out	19
7.	H. D. Foster, l.b.w., b. Gadsby	16
8.	H. A. Thomas, l.b.w., b. Gadsby	2
9.	W. E. Roden, b. Gadsby	8
10.	C. L. T. McClintock, not out	8
11.	S. Coffey, c. Surridge, b. Gadsby	0
	Extras	7
	Total	155

Hospital Information, etc.

Pass List

UNIVERSITY OF LONDON.

THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.

May, 1937.

Pass.

E. R. Bowes
J. C. Colbeck
J. E. Elliott
T. H. Hills
T. E. Howell
B. W. Hunt
E. D. H. Williams

GROUP I.

D. Graham-Brown
P. H. Denton
B. G. A. Lilwall
A. E. Loden
M. Lubran
W. M. Philip
S. H. Raza
A. C. Ricks
M. R. Woods

UNIVERSITY OF CAMBRIDGE.

M.B., B.Ch.

The degree has been conferred on

F. I. Evans.

M.B.

The degree has been conferred on

C. M. Ryley
E. Sharp
A. M. Weston
C. E. R. Wood

SOCIETY OF APOTHECARIES OF LONDON.

FINAL EXAMINATION.

May, 1937.

Surgery.

J. R. Audy
A. W. Box
*W. G. Zorab

Medicine.

*P. A. Gardiner
*B. A. R. Pitt
*R. H. S. Thompson

Forensic Medicine.

*P. A. Gardiner
*B. A. R. Pitt
*R. H. S. Thompson

Midwifery.

A. W. Box
J. D. B. Perkins
W. E. Young

* Have now completed the examination.

UNIVERSITY OF OXFORD.

Natural Science.

Trinity Term, 1937.

Biology and Physics.

C. Kennedy.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

L.D.S.

FIRST PROFESSIONAL EXAMINATION.

Dental Mechanics and Dental Metallurgy.

J. A. Avasia
J. L. Badgett
J. E. Barlow
E. Butterfield
J. H. Capon
D. W. A. Drew
M. A. Hamid
L. M. Irwin
A. Kinghorn
W. A. T. Parsons
G. M. A. M. Whittall

Anatomy and Physiology.

K. S. Bacon
J. E. Barlow
B. M. Cox
A. P. Davies
J. A. Dossor
P. D. Jones
A. M. Pollard
F. G. Triay
M. Wilks

Special Anatomy and Physiology.

E. R. Burt
J. H. Capon
H. V. Cockburn
G. W. Donn
J. A. Dossor
D. W. A. Drew
W. F. Dunn
A. Forbes
R. G. James
P. E. Jeffery
R. C. Jones
A. Kinghorn
E. J. Martin
S. G. McCallin
H. J. Nicholls
R. D. Plowman
J. A. R. Smit
F. N. Stares
R. G. M. Stobie
F. G. Triay
A. T. Vale
H. A. Woodward

Papers by Guy's Men

C. Worster Drought. The care and treatment of inflammation of the nervous system in the pre-school child. *Pract.*, 1937, cxxxviii, 687.

Martin A. Rushton. Partial gigantism of face and teeth. *Brit. Dent. Jour.*, 1937, lxii, 572.

T. Izod Bennett and Others. Treatment of diabetes; Clinical and experimental observations with new Insulins (with charts). *Lancet*, 1937, i, 1319.

H. St. John Rumsey. The future of speech therapy. *Post.-Grad. Med. Jour.*, 1937, xiii, 215.

Norman Burgess. Physiotherapy in diseases of the skin. *Post.-Grad. Med. Jour.*, 1937, xiii, 209.

L. J. Witts and Another. Chronic agranulocytosis successfully treated with liver. *Brit. Med. Jour.*, 1937, i, 1197.

Min Sein. Hæmoglobinuria caused by plasmochin taken as a prophylactic against malaria. *Indian Med. Gaz.*, 1937, lxxii, 86.

Ibid. Lymphatic cyst of the ear. *Lancet*, 1937, i, 1281.

Ibid. Case of thrombo-angitis obterans treated by femoral peri-arterial sympathectomy. *Indian M. Gaz.*, 1936, lxxi, 82.

Ibid. Congenital and familial absence of hair from the whole surface of the body. *Lancet*, 1936, ii, 564.

H. St. John Rumsey. Facts and theories about stammering. *Medical World*, 1937 (May).

A. H. Harkness. Infections of the bulbo-urethral glands of Cowper. *Brit. Jour. Ven. Dis.*, 1937, xiii, 119.

Lt.-Col. H. Stott. Heat exhaustion and dehydration in the Arabian Desert. *Jour. R.A.M.C.*, 1937, lxviii, 379.

Changes of Address

J. Kenneth Donald, 4, Landseer Road, Bournemouth West, Hants.

Maurice E. Jago, M.D., St. Blaize, Grove Road, Sutton, Surrey. *Sutton* 50.

G. B. Henley Jones, 95, Queen's Park Parade, Kingsthorpe, Northampton. *'Phone* 2542.

P. M. F. Bishop, 9, Devonshire Place, W.1. *Welbeck* 6241.

Births

PANTIN.—On May 25th, 1937, to Stella (née Alcock), wife of C. G. Pantin, M.B.—a daughter.

Marriage

SHEPHERD—MOSLEY.—On June 9th, 1937, at Strand Church, Whitefield, Manchester, very quietly owing to recent bereavement, by Canon A. Kershaw, M.A., Percy Rae Shepherd, L.D.S., R.C.S.Eng., only son of the late J. Percy Shepherd, of Heaton Moor, near Manchester, and Mrs. Everard Hesketh, of Middlefield, Chislehurst, Kent, to Christine Elaine Mosley, A.C.A., daughter of Mr. and Mrs. E. O. Mosley, of St. George's Square, St. Anne's-on-Sea, Lancashire, formerly of Whitefield and Bury. At home: Woodfield, Priory Close, Chislehurst Road, Chislehurst, Kent.

BROWN—TEASDALE.—On June 10th, 1937, at the Parish Church, Llandough, G. Morwent A. Brown, L.D.S., R.C.S.Eng., of 77, Plymouth Road, Penarth, to Eleanor Teasdale, of Newcastle-on-Tyne.

EDS. {A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *3rd July* 1937 — *Number* 1277

PASSIM

WITH the end of June has come the retirement of Mr. Eason from the post of Superintendent, in order that he may take up his position as Principal of the University of London, and, as we have said, our loss is the University's undoubted gain. We have known of Mr. Eason's retirement for a long time now, but the more we think of it the more we regret it, as he has seemed to become such an imperturbable part of the life of the Hospital, and we hope, before very long, to publish an appreciation of his work here. Meanwhile, it only remains for us to assure him of our best wishes as he takes up his new and honourable appointment, and to repeat our opinion that the University could have made no finer choice in its election of a Principal.

We understand that Dr. J. J. Conybeare will undertake the duties of Superintendent until the beginning of October, and that before long an announcement will be made as to the election of a permanent successor to Mr. Eason.

FOR some time now there has been a certain amount of discussion about the teaching of surgery here, and we have heard some suggestion that a post of Clinical Tutor might be established to assist with the instruction of the large number of students at present in the wards. However, the whole position of surgical teaching in the wards now is complicated by the absence of two surgeons, whose teaching is most valuable.

Mr. Hughes has, unfortunately, been ill for many weeks, and it is with great regret that we learn now that he has been forced to take a long holiday, and that at the best it will be several months before he will be able to resume his work here. This is indeed very sad news, and we would express to Mr. Hughes our deepest sympathy, for his teaching will be missed sadly by a far wider circle than his immediate firm; also our hopes that he will soon be restored to health and that his absence will be of the shortest possible duration.

The Surgical side sustained yet another temporary loss last week, and we were deeply shocked to learn that Mr. Ogilvie had met with a serious accident while motoring and had been taken to the Middlesex Hospital, where he was found to have sustained several fractures. Nevertheless, we are delighted to know that Mr. Ogilvie is now more comfortable and that his progress is regarded as being satisfactory, and feel sure that all our readers will join with us in wishing him a rapid convalescence.

Meanwhile, we have heard it said that there is a possibility of a fifth Assistant Surgeon being appointed to the Staff, since it will be, at the very least, several months before either Mr. Ogilvie or Mr. Hughes will be back at work, and in the meantime the amount of extra work that will fall to the lot of the Assistant Surgeons and the Registrars will be enormous. How much truth there is in this rumour we are quite unable to say, but in our opinion the idea of having a fifth Assistant Surgeon at the present time seems a wise one, for, whatever may be the arguments against it, there is no doubt that, during a period when any of the senior surgeons are likely to be away through illness, and also during the months when many of the Staff are away on holiday at the same time, there is ample work to justify such an appointment. If a fifth Assistant Surgeon were appointed (after all, it would only be reverting to the system that was in force four years ago) and for any reason it was found to be unsatisfactory, there would be no difficulty about reducing the number again to four, because there is bound to be another vacancy in the Staff in less than two years' time, and no appointment would need then to be made.

All this, we are aware, is no direct concern of ours, but, at any rate, as a temporary measure, the idea seems reasonable enough to us.

▭

In our last number we promised to give details of the Appeal, and, as it is now just under a year since this was first launched, perhaps it is a convenient and sensible time to make some sort of review of the progress so far. To do this in words would occupy several pages, and we think that by far the fairest and clearest idea of what has been accomplished may be had by examining the chart, which has been prepared for us, and which shows in detail the amount of money promised, the amount actually received up to date, as well as the relative rate of income, month by month since the opening of the Appeal on July 16th last year.

However, there are a few items of general interest connected with the Appeal to which we would draw attention. First of all, a new Standing Appeal Committee has been formed for the purpose of raising money for the maintenance of the Hospital, in contrast to its enlargement, and to attempt to increase its income from voluntary sources. Captain Eric Waley has very kindly consented to act as Chairman of this Committee, and the services of two students have been secured, since it is felt that, judging by their ability to collect money in the street, our present-day students might be more than useful to the Appeal Staff. We hope that this Committee will before long be successful in augmenting our income.

Another item of interest is the fact that, through the kindness of Sir Arthur Hurst in allowing his grounds to be used as a car park during Ascot, an amount of £95 was handed over to the Appeal, a most handsome sum and nearly twice that received last year. We are very grateful indeed to Sir Arthur Hurst for his continued generosity.

The grand total of the Appeal so far, including the conditional gift of eighty thousand pounds by Lord Nuffield, is just over one hundred and ninety-four thousand pounds, and it is to be hoped that before very long we shall be able to announce that the two hundred thousand mark has been reached. A very valuable contribution was the new Hospitals Week collection, the result of which we have already noted, but it is interesting to observe that, in spite of our restricted area, Guy's managed to collect a good deal more than any of the other hospitals, and that the total sum, namely £22,408, collected by all the hospitals under this new scheme, exceeded that obtained under the old system of separate collections by nearly two thousand pounds.

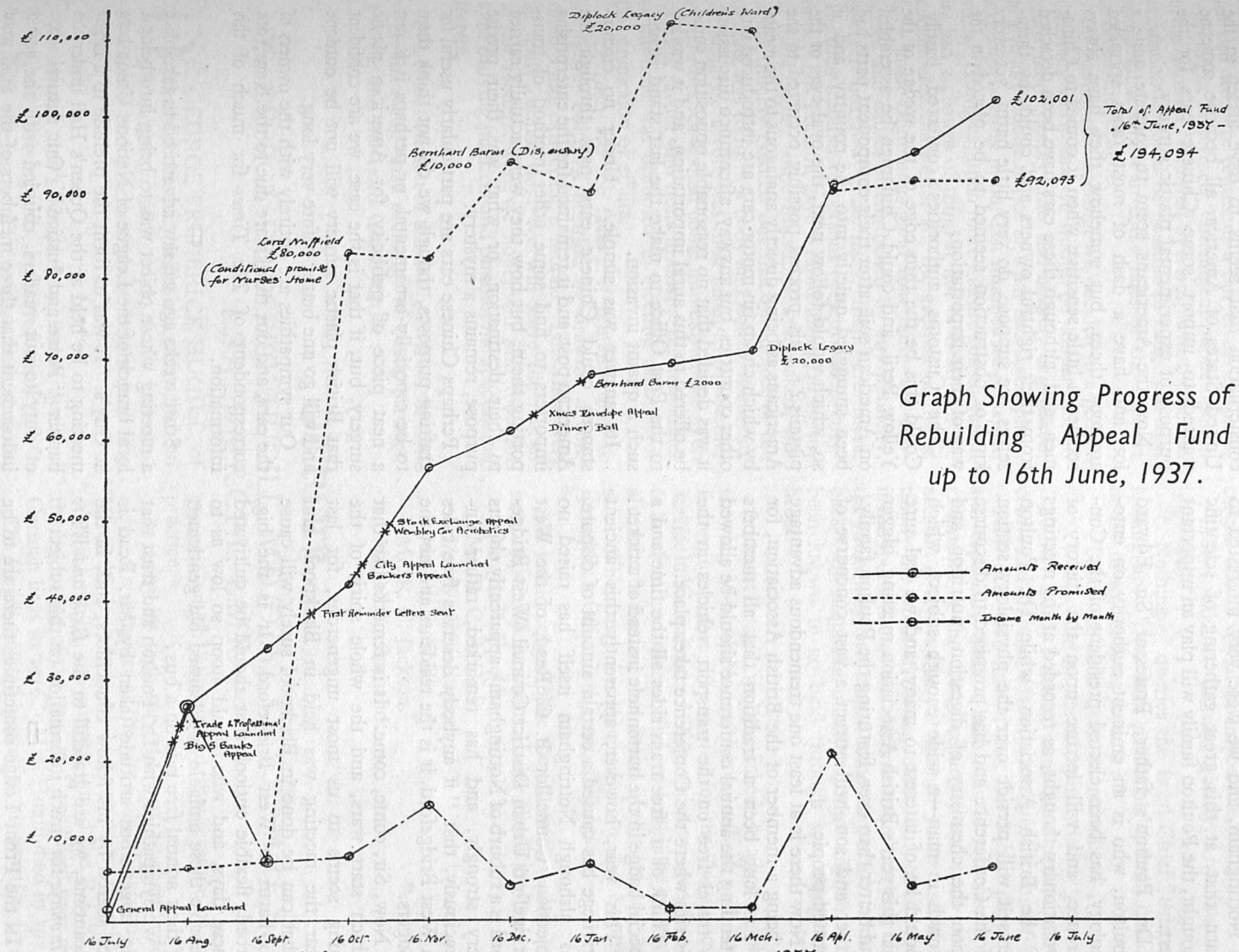
▭

It is with very great regret that we learned of the death of Sir Squire Sprigge, who for so many years had been the Editor of the *Lancet*, and for whom we had an immense admiration. From our own modest experience of medical journalism we have found difficulties enough, but the task of producing weekly a journal of the size and standard of the *Lancet* is one which we can scarcely comprehend, and we feel that the death of Squire Sprigge has left a gap in two professions that will not easily be filled.

▭

On a Saturday morning not so long ago, when the Park was looking at its best and the sleepier students were enjoying the sunshine, though prodded occasionally into wakefulness by the younger sons of members of the Staff, a sudden fierce clanging of bells was heard, sweeping down St. Thomas's Street and into the greater of the two Maze Ponds. The Out-Patient Officer on the Surgery dropped his paper, scenting business, but this was no ambulance, but a fleet of fire engines, complete with hoses and ladders in plenty, and firemen of all shapes and sizes, who all made for the Nurses' Home with an air of determination, leaving their glittering engines, like a row of hostile tanks, on the roadway by the Dental School. However, within an incredibly short time, all the firemen reappeared and, hiding whatever thoughts they may have wished to express well within their helmets, they drove off in perfect order and with great dignity, while the excited crowd that had gathered, and which had obviously tasted blood at the fire near the Elephant and Castle the night before, dispersed somewhat crestfallen. Some idea of its feelings can, perhaps, be gathered from the small boy, convalescing in the Park, who remarked, with ill-concealed disappointment, of a passing nurse, "Anyone dead?"

Now we have no idea what was the extent, or cause, of the fire, since the rumour that one of the Sisters had been seen smoking can obviously be discounted, and can only congratulate the Fire Brigade on its prompt extinction, but round by the back of the kitchens of the Nurses' Home there is a new iron chimney which gives out so much heat that almost anything might be forgiven for catching fire. This is the chimney of which we spoke a few weeks ago, and anyone wandering through the sub-equatorial atmosphere that surrounds the Laundry might well imagine Crippen playing cards with Jack the Ripper between the shovelling acts at the base of this furnace, so great is the resemblance to our idea of hell. Those who work in the Laundry have our sympathy, and it must be nice and snug in the Nurses' Kitchen, too, nowadays.



Graph Showing Progress of Rebuilding Appeal Fund up to 16th June, 1937.

IN September this year the British Association will hold its one hundred and sixth annual meeting, in Nottingham, and we were very interested to learn that, at this great gathering of scientific thought, the Poulton family will play an important part.

Dr. Poulton's father, Professor Sir Edward Poulton, who is an eminent authority on entomology, has been elected president of the Conference, and will lecture upon the history of evolutionary thought, as recorded at the meetings of the British Association, while Dr. Poulton himself will preside over the physiology section of the Conference and has promised to discourse upon the chemistry of digestion, nutrition and growth in man—a wide enough subject, which should be of interest to many, and we feel sure that this year's British Association meeting, bigger and better than ever, featuring the Poulton family, father and son, will attract a vast concourse of learned people.

Now there is at least one tremendous advantage in being a member of the British Association, for it has long been a tradition that all members attending the annual conference should be allowed to travel free on the transport vehicles in the district where the Conference takes place.

Think of it, free tram rides all the time and a special badge in the buttonhole instead of a ticket!

This year, however, apparently this ancient privilege has caused a certain amount of dispute, for although Nottingham itself has raised no objection, Councillor B. C. Read, of the West Bridgeford Urban District Council (West Bridgeford is a suburb of Nottingham), apparently objects very strongly, and has remarked, rather ungraciously, that "if anybody deserves free rides in West Bridgeford, it is the residents and not the lodgers."

Now, Sir, come, come. It is remarks like that which start wars, and the whole spirit of the thing seems to us most ungenerous, for last year the meeting was held in Blackpool, and what can be done in Blackpool surely will cause no harm in West Bridgeford. It is the big, broad, flexible outlook that should be cultivated these days, and who would stoop so low as to deprive these amiable and learned old gentlemen of their annual free ride on a bus?

We sympathise with Dr. Poulton and trust that the ungenerous attitude taken by Mr. Read is not shared by his fellow councillors, and, in the meantime, we are grateful to the *Bath and Wilts Chronicle* for much information on this subject.

IN the Front Lodge sometimes there are to be seen odd packages addressed to the various laboratories; a crate of mice, a few rats, a bottle of this or that, or perhaps a weird X-ray photograph, but never anything that is likely to evoke the consternation that seems to have arisen in the United States of America, all because someone wanted to import some Chinese ears for the purpose of experimental plastic surgery.

Now the Americans seem to tolerate quite a lot, and have a dash of most races sprinkled amongst them, but somehow they have always seemed a little sensitive when it comes to Chinamen, and, although these ears have been detached from their rightful owners and could, by themselves, we suppose, do very little harm, yet every kind of obstruction seemed to be placed in the way of their importation.

The Customs authorities conferred hastily. Could this be the thin edge of the wedge of the Yellow Peril, and could Chinamen be assembled on American soil, after their component parts had been smuggled quietly into the country, and, if so, which would follow next, the oval eyes or the pigtails? This process possibly occurred to the Americans as being directly analagous to the means by which cheap tin motor cars are introduced into other countries, but anyway, after much discussion, it was decided that no reasonable opposition could be offered to this aural importation, and it was left to the Post Office to make the last stand against such a quaint invasion.

Its answer was simple. Under no circumstances could Chinese ears pass through the American post, and it remained for the enterprising importers to find some other method of transporting them, but how they were actually carried to their destination, or what was their precise purpose, remains a mystery.

Perhaps Chinese ears are particularly useful for grafting purposes, though we do not think them to be especially ornamental, or perhaps it is just a neat piece of publicity for American plastic surgery, but, if that is the case, we are confident that British plastic surgery will not be outdone and will go one better before very long.

Our sympathies are entirely with the owners of the ears, and our thanks are due to the New York correspondent of *The Times* for much of this information.

SOME weeks ago we saw advertised to take place a meeting whose object was to bring into being a local branch of the League of Nations Union here at Guy's. It was to form the prelude to a larger meeting to be held at the Queen's Hall under the banner "Peace and Justice." Our natural sense of duty to our readers, coupled with the added inducement that three members of the Staff were to speak, prompted us to attend. We were also most curious to discover to what extent the League

of Nations and its doings found favour with the nine hundred students at this Hospital, as it was felt that we here represent a fair cross-section of what might be termed " intelligent public opinion in the country," and that by a simple mathematical calculation it would be possible to gauge the total numerical strength in these Isles of the support accorded the League.

On leaving the meeting, we decided in a proper Christian spirit that it would be kinder not to probe more deeply into the matter, or, indeed, to give any public notice of what had taken place, and consequently in our last number we remained silent. However, upon more mature consideration we had a change of mind if not of heart, for we remembered that, after all, the greatest of things have small beginnings, and that faiths are confirmed and causes strengthened by any publicity, however noxious. The facts, then, are these. The total number of persons present was twenty-three; Dr. Poulton gave a rapid historical survey of the League, some questions were asked, but it was quickly pointed out that the object of the meeting was to form a body and not to discuss its desirability; a vote was then taken as to whether a Guy's branch should come into existence. Ten voted in favour and none against; the remainder of the time was occupied in electing officers for the conduction of affairs.

Such then are the facts; it remains only to justify our editorial position by drawing a conclusion and extracting a moral. This, however, we really cannot do. We will leave the matter to our readers, who, we hope, will find food for some edifying political and philosophic speculation therein.

▭

IN a recent edition of the *Daily Express* we read of the following brisk exchange of words between a doctor and the Lord Chief Justice :—

" The fair-haired young doctor, giving evidence, is quite unshaken by Counsel's suggestion that certain effects would be impossible.

" ' In medicine,' he says quietly, ' nothing is impossible.'

" ' Nothing ? ' queries the Lord Chief Justice, looking up. ' If a man pricks his thumb, could he die of scarlet fever from it ? '

" ' There are such cases on record.'

" ' Well, could he die of diphtheria ? '

" ' My Lord, I myself attended a patient who contracted diphtheria from scratching his finger.' "

Now it is well known that fair-haired people, and especially those whose hair is red, are apt exponents of the art of repartee, and from this account it seems that the learned Judge had distinctly the worst of the argument, but, of course, if the young doctor was the one we are thinking of, the Judge may have staged something of a " comeback " by inquiring mildly whether anyone had been known to go bald through scratching his head.

▭

A MONTH ago we published a photograph showing Miss McManus, Lord Nuffield and Mr. Eason just before they started for the Coronation service in Westminster Abbey, which we considered to be of unique interest, and we would like to draw attention to the fact that copies of this are now on sale. They may be obtained from the Superintendent's Office, price two shillings.

▭

WE would congratulate the following on having been appointed Assistant House Physicians :—

Mr. E. B. French.
Mr. R. C. S. Dick.
Mr. W. G. Tillmann.
Mr. A. D. Willis.
Mr. R. C. Jackson.
Mr. N. K. Burnand.

Obituary

DR. GEORGE FREDERICK HUGILL, M.D.(Durh.), L.R.C.P., M.R.C.S., L.S.A., L.M.R.C.P.I., L.M.R.

DR. GEORGE FREDERICK HUGILL, of Elmfield House, Balham, who died on Wednesday, 26th May, from bronchopneumonia, had practised there for the past fifty years.

He entered Guy's Hospital, where he qualified in 1884. Following this, he joined the P. & O. Steamship Company as physician and surgeon, and was out in the East for some years. He then went to the Rotunda Hospital, Dublin, where he took his degree for midwifery, and gained experience which later proved the keystone of his practice.

In 1903 he took the M.D. of Durham. He married a daughter of the late Colonel Vernon, of Harefield, by whom he had two sons, the elder died in infancy, the younger joined the R.A.F. at the beginning of the war, and was killed over the German lines in 1916. Mrs. Hugill died in 1915.

Dr. Hugill devoted himself to his practice, from which he retired some years ago.

He was universally loved and respected, and will be greatly missed by all who knew him.

The Pathogenesis of Carcinoma of the Stomach

A Seven-Minute Note, read before a Conference on the Treatment of Cancer by Sir Arthur Hurst

IT is clear from what we have already heard this afternoon that there is no immediate prospect of any successful treatment for at least 90 per cent. of cases of carcinoma of the stomach. We must therefore turn to prophylaxis. I believe that carcinoma never develops in a healthy stomach. I have published abundant evidence to show that in the 70 per cent. of cases with achlorhydria the carcinoma results from malignant degeneration of chronically inflamed mucosa, the achlorhydria being a result of the preceding gastritis and not of the carcinoma. In the remaining 30 per cent. of cases with a normal or high acidity the evidence is equally conclusive that the carcinoma is a result of malignant degeneration of a simple ulcer. The chronic gastritis and the simple ulcer are caused by chronic irritation, the former especially in individuals born with a hyposthenic gastric constitution and the latter in those with a hypersthenic gastric constitution. People with an average stomach are probably less likely to develop gastritis or ulcer when their gastric mucous membrane is subjected to chronic irritation; they are therefore less liable to carcinoma of the stomach.

The irritants which give rise to gastritis and gastric ulcer are mechanical, chemical and thermal; food insufficiently broken up and softened owing to its coarse character, to hurried meals, or to insufficient teeth or dentures irritate the mucous membrane mechanically; alcohol and tobacco, highly seasoned food, drugs, and saliva swallowed by patients with oral sepsis are chemical irritants; very hot and very cold food and drinks are thermal irritants.

The total incidence of cancer is approximately the same in both sexes, in the rich and the poor, and in all nations. If cancer of the uterus and breast are excluded, the relative incidence in different organs is the same in men and women. It is also the same in the rich and the poor and in different nations, with one supremely important exception—the stomach being involved three times as often in the poor as in the well-to-do, and in only 22 per cent. of all cases of cancer in Great Britain compared with 42 per cent. in America, 55 per cent. in Holland, and 66 per cent. in Czecho-Slovakia.

We have recently tried to discover the cause of the difference between the incidence in England and Holland—22 compared with 55 per cent. The total incidence of cancer is the same in the two countries, and we have found that the incidence of the hyposthenic and hypersthenic stomach is also the same. We must therefore look for a difference in extrinsic causes. Herbert and Bruske have compared the teeth and dietetic habits of 500 out-patients at Guy's with those of 500 at the Wilhelmina Gasthuis in Amsterdam: 58 per cent. of the Dutch ate too quickly and chewed insufficiently compared with 11 per cent. of the English; gross oral sepsis was present in 44 per cent. Dutch and 28 per cent. English. Spiced foods were eaten in excess by 48 per cent. Dutch and 19 per cent. English, and official statistics show that the consumption of spirits is much higher in Holland than in England; 43 per cent. of the Dutch were accustomed to swallow their food and drink at a temperature over 60°, compared with only 22 per cent. English. Lastly, 62 per cent. Dutch but only 13 per cent. English smoked more than 4 ounces of tobacco, whether cigarettes, pipes or cigars, a week, and 18 per cent. of the Dutch, but none of the English, chewed tobacco.

It is surely significant that wherever there is a difference between the dental condition and the dietetic and smoking habits in England and Holland it is to the advantage of England. It seems reasonable to assume that the more frequent and more severe irritation of the gastric mucosa in the Dutch leads to a greater incidence of achlorhydric gastritis in individuals with the hyposthenic gastric constitution and of gastric ulcer in those with the hypersthenic gastric constitution. If my views as to the origin of carcinoma of the stomach are correct, this would explain why its incidence is so much greater in Holland than in England. Insufficient teeth and dentures and oral sepsis, coarser food and stronger tobacco may account for the greater incidence in the poor compared with the rich.

At present we have no knowledge of how the general liability to cancer can be controlled, and the organ inferiority which predisposes to achlorhydric gastritis on the one hand and to gastric ulcer on the other cannot be modified. But the extrinsic causes—gastric irritants of all kinds—however trivial they may appear to be, can be avoided, and it should at least be possible to lower the incidence in the very poor by two-thirds to bring it down to the level of the incidence in the well-to-do.

The future is full of hope. By preventing the development of achlorhydric gastritis and gastric ulcer in the predisposed by simple hygienic methods cancer too should be prevented; and even if gastritis and gastric ulcer are not abolished, their early recognition and adequate treatment should result in their cure before malignant degeneration has had time to occur.

The Disposal of the Dead

By Stanley Lees, Esq.

MEN have been fantastical in the singular contrivances of their corporal dissolution, but the soberest nations have rested in two ways—of simple inhumation and burning. That interment is of the older date the examples of Abraham and the Patriarchs are sufficient to illustrate. But Christians abhorred the way to obsequies by burning, and, though they stuck not to give their bodies to be burnt in their lives, detested that mode after death, affecting rather a depositure than absumption, and properly submitting unto the sentence of God to return not unto ashes but unto dust again.

These quaintly decorated words, used by Sir Thomas Browne in his treatise on urn-burial, explain why depositure has for so long been preferred to destruction in the disposal of the human body. The instant and total dispersion of the body, whether by fire or other means (as that practised by the late Dr. Lakington), has been thought to provide an end altogether too abrupt and indecent to a body which in life sheltered a delicately woven structure of thoughts and memories. It is therefore the more remarkable that the English law has at all times been unimpressed by the sacredness of the cadaver, and has not until recent times imposed much restriction upon its disposal.

When a human body dies in this country, a duty at law at once devolves upon the survivors to dispose of it. Yet this obligation is not imposed from any religious scruple, but merely to avoid nuisance; so that the survivors' duty is purely negative. The law has never precisely defined the class of survivors upon whom falls the obligation of disposing of the dead; it is established that executors have such a duty, the householder in whose house the death takes place, the surviving husband or wife, and the parent of a dead child. It is not clear whether an immediate duty would fall on more than one of such persons in any particular instance.

Burial is the customary method of disposal in this country, but no prohibition has ever been placed upon other methods. The law does not require burial to be effected in any particular place, nor, unless the body is laid in consecrated ground, with any prescribed ceremony. The survivors are, however, under a duty to dispose of the body with decency, and to disregard decency would be a misdemeanour at common law. Where, however, a prisoner burnt the bodies of her children in a kitchen range in her own house, and it was admitted that no public nuisance had thereby been caused, it was held (*R. v. Byers*, 1907) that no offence had been committed. So, too, burial in private ground is permissible, so long as no nuisance is caused and (especially in London) the provisions of local Acts, the Public Health Acts and other statutory provisions are observed.

It is an offence to bury a body so as to prevent the holding of an inquest in any case in which the coroner has reasonable grounds for holding an inquest. It is also an offence to conceal the birth of a child—a thing not infrequently done by burying the corpse.

Cremation is now regulated by the Cremation Act, 1902, and no cremation of human remains may take place except in a crematorium as regulated by the Act. It is not lawful to cremate the remains of a person who is known to have left written directions to the contrary, nor to cremate an unidentified body. It is, however, not clear how far the word "cremation" is meant to extend; in the case above quoted of the woman who incinerated her children in the kitchen range, it was contended by her Counsel that the word "cremate" meant not merely to burn, but to burn in a crematorium. This contention was upheld, and the woman was acquitted of the charge brought under the Crematorium Act, 1902. Certainly before that Act it was not unlawful to burn a body, and there is no reason to suppose that the Act intended to refer to anything but the practice of cremation as thereby regulated.

Application for a cremation must be made by an executor or nearest surviving relative or other person showing a good reason. The application cannot be entertained unless there is produced a certificate by the medical practitioner who attended the last illness and can definitely certify the cause of death, confirmed by the certificate of an expert pathologist appointed by the cremation authority (or in emergency by their medical referee), or unless a *post mortem* has been made by such an expert pathologist and a certificate given by him of the cause of death, or unless a *post mortem* has been made, an inquest held and the cause of death has been certified by the coroner. The remains of a still-born child may be cremated if a registered medical practitioner who has examined the body certifes it to have been still-born, but, except where an inquest has been held and the coroner has given his certificate, a certificate must be produced showing that the stillbirth has been

registered under Sec. 7 (4) of the Births and Deaths Registration Act, 1926.

A further instance of the astonishing disrespect in which English law holds the dead bodies of the citizens is that there is no property in a body. Possession there may be, and it is possession which may give rise to the duty of disposal, but, like fresh air and wild animals, the cadaver is incapable of being owned. This curious accident of the body is subject to a few qualifications; thus it is believed (though the law is far from settled) that a survivor who is obliged to dispose of the body is also entitled to retain possession of it against other persons, and that to deprive him of his possession would be a misdemeanour. And when a gaoler sought to retain against relatives the body of a debtor who had died in the prison, it was held that he had no right to withhold it as security for the debt, but must yield it up for burial. This accident of the body, however, only applies to the corpse itself, and not to any of its accoutrements; it was decided as long ago as 1613, in *Haynes' Case*, that, although no man can own the corpse, its shroud belongs to him who last owned it before it was draped about the corpse. Body-snatchers are therefore guilty of larceny if they remove the coffin or any of the grave-clothes.

Although the law in general has always recognised the absence of property in a corpse it was, nevertheless, at one time a felony to steal dead bodies for the purpose of witchcraft; this offence was created by the Statute I Jac. cap. xii, and it persisted until the more enlightened Witchcraft Act of 1735. It has long been an offence at Common Law to disinter a body without lawful authority, whether for dissection, sale, or even for pious purposes. And to-day, except for the removal under a faculty (as when a body is transferred from one parcel of consecrated ground to another), it is unlawful to remove any body which has been buried, without a licence from the Secretary of State for the Home Department. A coroner may, nevertheless, order a body to be disinterred within a reasonable time after death, either to make an original inquisition, if none has been made, or for a further inquisition if an earlier was insufficient; but it is unsettled whether the coroner's order should strictly be supported by the Home Secretary's licence.

It follows from the absence of property in a corpse that a testator cannot legally dispose of his body either by will or in any other way. It is, of course, not uncommon for persons to express a wish that their bodies be used for dissection, or disposed of in a particular way, but there is strictly no manner in which such a direction can be made infallibly binding on the survivors. It is also possible to bring pressure to bear upon the executors by the granting of legacies subject to the body being dealt with in a prescribed way; but often the condition is void as against public policy, or for superstition, and the direction is invalid. Ordinarily an executor or any other person having lawful possession of a dead body (and not being an undertaker or other person merely entrusted with it for burial) may permit a body to be anatomically examined, unless the deceased person forbade it in writing during his life, or on his death-bed before two witnesses, or unless the surviving husband or wife or any known relative of the deceased person requires interment without examination. On the other hand, the person having lawful possession of a body is bound to obey a direction by the deceased that the body be anatomically examined, unless interment without such examination is required by the surviving husband or wife or, in this event, the nearest known relative.

These provisions are contained in the Anatomy Act, 1832, which also provides for the licensing of persons who desire to practise anatomy; this practice may only be carried on by a licensee who must be either (1) a Fellow or Member of a College of Physicians or Surgeons, (2) a graduate or licentiate in medicine, (3) a person legally qualified to practise medicine in any part of the United Kingdom, or (4) a professor or teacher of anatomy, medicine or surgery, or a student attending a school of anatomy. A licensee may receive or possess a body and examine it, but anatomy may only be practised or taught, and bodies may only be received or possessed at a place if notice of that place has been given to the Ministry of Health a week before the body is received. The licensee who receives a body must demand and receive a death certificate, and within 24 hours must transmit this to the Inspector, or, if there be no inspector, to a physician, surgeon or apothecary residing near. Inspectors are appointed by the Ministry of Health, hold office for a year or until removal or refusal to act, and enjoy a salary not exceeding £100 per annum. A body may not be removed for anatomical examination from the place where the deceased died until 48 hours after death, nor until 24 hours after notice has been given to the Inspector (or physician, surgeon or apothecary); it must be moved in a decent coffin, and after dissection must be decently buried in consecrated ground or in the public burial place appropriate to the religious persuasion of the deceased person. A certificate of interment must be sent to the Inspector. The Anatomy Act, 1832, which was passed to terminate the scandals of grave-opening and body-snatching, conferred

immunity upon the licensee from any penalty to which he might otherwise be subject for receiving or having in his possession a dead human body for dissection; ten years before the Act it was held (*R. v. Cundick*) that to sell the corpse of a capital convict for dissection, when dissection was no part of the sentence, was a misdemeanour indictable at Common Law.

By the Burial of Drowned Persons Acts, 1808 and 1886, it was provided that any police constable acting in any parish outside London in which a dead human body may be found floating or cast up upon the shore must, on notice brought to him, with all convenient speed cause it to be decently interred in the churchyard. The person finding the body is bound to give notice to the police within six hours, and the policeman receiving the notice is bound to act under a penalty for default of £5, payable not by the parish, but himself personally. A clergyman can refuse to inter such a corpse only "if the party deceased were denounced excommunicated *majori excommunicatione* for some grievous and notorious crime (and no man able to testify his repentance)"; such is the solemn injunction of the Canones Ecclestiastici, 1603.

All these provisions appear to be directed more to the welfare of the living than toward the dignity of the dead; and in the days when unlawful exhumation was more to be feared than it is to-day, it was left to the private individual to take his own precautions. Thus the executors of one Mary Gilbert sought in 1819 to deposit her mortal remains in an iron coffin in the churchyard of St. Andrew's, Holborn; the wardens, however, were disturbed that this new fashion would swiftly fill up their burying-place with indestructible matter, leaving no room for more interments (and more fees); they accordingly objected and took the case to the Consistory Court. There Sir William Scott delivered a stately and monumental judgement in which he reviewed the whole history of sepulture. "Few," he said, "have firmness, or rather hardness of heart, sufficient to contemplate without pain the total and immediate extinction of those who were justly dear to them in life. A feeling of this kind has been supposed to have caused the preference of burial to the process of burning. Coffins are temporary securities, certainly not of longer duration than is necessary for the protection of the bodies they contain from the ravages of the reptiles of the earth, if any such ravages are to be apprehended. In later ages and in populous cities, other and more formidable invasions are to be apprehended—more, I mean, committed by persons employed in furnishing subjects for dissection—an employment which, whatever its necessity, is certainly conducted not without lamentable violations of natural feelings and occasionally of public decency itself." Sir William allowed the interment in the indestructible coffin, but with a nice compromise made it conditional upon the disbursement to the wardens of a higher fee.

Correspondence

Medical Holiday Course in Germany

To the Editor of the GAZETTE

SIR,—I wonder if any Guy's men would be interested in a Medical Holiday Course in Germany?

Such a course is being organised from Bart.'s. During the last week in July doctors and students will be the guests of the civic and medical authorities of Frankfurt-au-Main.

The programme includes visits to the Medical Polyclinic, the Institutes of Radiology, of Gynæcology, of Skin Diseases, of Pathology, of Neurology, the Bureau of Heredity and Race Hygiene, etc., and to Nauheim Spa. At most of these the heads of the departments organise special series of lectures, cinema shows and demonstrations.

Knowledge of German will by no means be essential, as English-speaking student guides are provided and the lectures are in English or directly interpreted.

Other activities will receive full time, and the holiday will certainly not be only a series of scientific studies. Apart from its historic and artistic value, Frankfurt provides many entertainments, and visitors last year (from St. Thomas's Hospital) found it a very gay town. The holiday includes visits to Heidelberg, a Nazi political school, a work camp and the surrounding country.

Evenings and week-ends will be free, and in any case there will be no need to follow all the course as arranged.

The cost of £12 5*s*. includes all travel, meals, hotel accommodation, courses, excursions, service of guides and tips.

The dates are July 17th to August 2nd.

Any Guy's men would be extremely welcome, and I should be very grateful if you would publish this so that anybody interested could get into touch with me.

Yours, etc.,

A. S. PLAYFAIR.

St. Bartholomew's Hospital, E.C.1.

Ship's Nursing on the "Queen Mary"

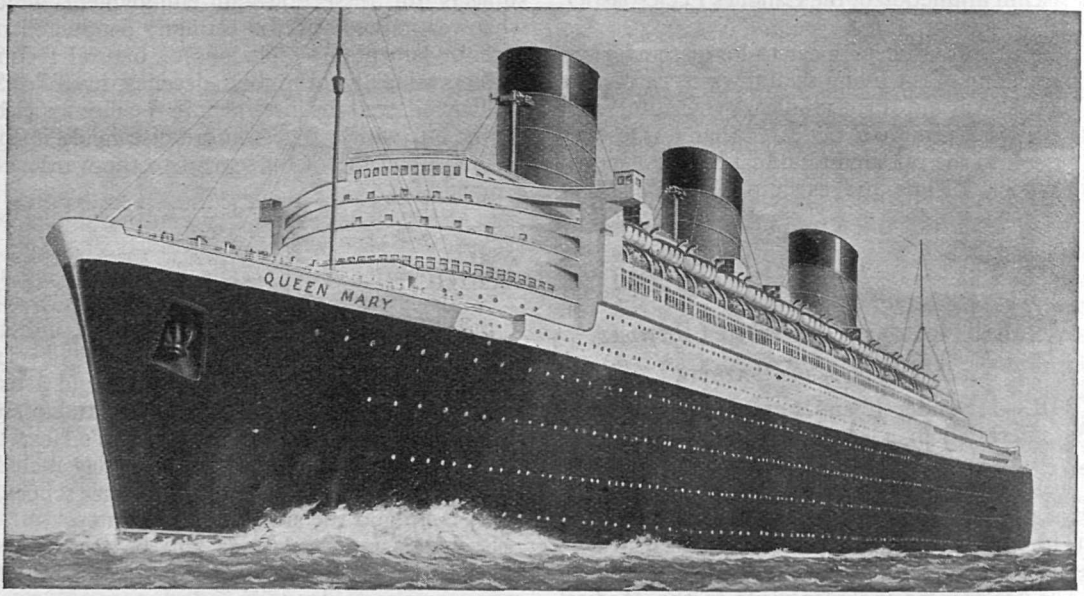
To the Editor of the GAZETTE

SIR,—I can claim to know very little of ship's nursing in general, only having been on one ship for a few months.

However, I can give some idea of the Medical Department and our work on board the *Queen Mary*.

The hospital is amidships on "D" deck (so situated to ensure a minimum amount of movement and vibration). It consists of an Open Ward with five beds, Male and Female Private Wards with two beds in each, a Third-class Female Ward having three beds (one of which is especially wide for maternity work), a Dispensary (where most of the treatment is done for the crew and third-class passengers), and a Theatre with a shadowless light and adjustable table.

A variety of electrical appliances are installed, including diathermy, ultra-short wave and Bristow-coil apparatus, infra-red and ultra-violet lamps; also an X-ray plant.



R.M.S. "Queen Mary"

The Isolation Hospital is away in the stern, but is used more often for stowaways than patients!

There are two Medical Officers on board—a physician and a surgeon; the remainder of the staff comprises three nursing sisters, two dispensers and two hospital attendants.

The work is best described as a mixture of health visiting, district, and private nursing.

One may imagine that the amount of work varies a great deal, for at times both day and night duty may be necessary if a patient should need constant attention. Even when we are not busy we get plenty of exercise on a ship of this size, for most of the patients are nursed in their cabins, except those who are really ill, and members of the crew.

A fair amount of minor surgery is done, and three major operations have been performed during the year.

The passengers are even more varied in type than our work, and one gets all kinds of surprises. For instance, when homeward bound last trip a little old man was admitted into hospital with subacute obstruction. He had a strong American accent, and talked incessantly—as most Americans do. After a while he asked what my medal was; I told him, and immediately he held out his hand and said, lapsing into broad Cockney, "Guy's 'Orspital! well, I niver!"

Fifty-five years ago he lived in the Old Kent Road, and was now on his way home for the first time, simply to see the East End again. When he was a boy he went into Guy's after being kicked while playing leap-frog. From what he said, some of the treatment was not carried out in the most pleasant fashion in those days—but he loved the "'Orspital" just the same.

Yours, etc.,

FARMER.

R.M.S. *Queen Mary*.

Reviews

Notes on Operative Dental Surgery for Junior Students. By H. F. HUMPHREYS, M.B., Ch.B., M.D.S. Published by Messrs. Edward Arnold & Co. *Price* 4*s.*

OPERATIVE Dental Surgery has essentially to be learnt by chairside demonstration, and the reading of books on this subject occupies but a small part of the dental student's time. This little book, however, will be of use to the student during his course in the " Phantom Head " room.

The first chapter is devoted to " Charting and Diagnosis," and teaches the student to examine the teeth and jaws in a systematic manner; as a basis for dental case-taking it is excellent. There follow chapters on cavity preparation and dental restorations by filling, on tooth extraction and local anæsthesia. One would have wished to find more about regional anæsthesia, which is used by the student early in his career in the local anæsthetics extraction rooms; the plea that this method be used only under supervision applies equally to the whole field of operative dentistry as far as the junior student is concerned.

The book concludes with chapters on treatment of lesions of the dental pulp, gingivitis and pyorrhœa, and the treatment of children's teeth. It sets out clearly and concisely the essentials of technique upon which the student will later build his own methods, and at the same time teaches him to regard the patient as a human being and not merely as a set of teeth on which he may practise his art.

Sport

THE ANNUAL SPORTS

THE Annual Sports were held at Honor Oak Park on Wednesday, June 16th. The morning threatened rain, which reduced the number of spectators, who have never been scarcer. Thanks to the officials and the keenness of everyone present, we had a very successful meeting, the rain keeping off till tea-time.

This year we scrapped several traditions and experimented with new ideas. The sports were held later than usual to give more time for training and on the off-chance of having fine weather. Both these hopes were frustrated, since the average standard in the field events was poor and the English summer's day was traditional. We also tried having them on a Wednesday to prevent the sports clashing with week-enders, and to accommodate the Cricket Club. However, there were dismally few spectators.

On Monday, the three miles was won by Etheridge in 15 min. 11 sec., beating the record of 15 min. 24 sec. made by H. A. Munro in 1892. A new event, the 440 yards hurdles, was won by a newcomer, E. O. W. Jones, who was unlucky to injure his foot. Throwing the hammer was again won by Smit with a good throw of 92 feet.

On Wednesday the field and track events were run concurrently, and we managed to keep up to time. In the mile, Etheridge broke his own record by 3 seconds in 4 min. 34 sec. In the hundred yards handicap the handicapper overestimated the handicap of flannel trousers, and it was won by G. Crabb.

The rest of the competitors made a very good race for second.

The pole vault, a new event, showed new talent, and was won by Blackburn at 10 ft. 6 in. In the 440 yards, Fletcher was forced to withdraw owing to a pulled muscle. It was very bad luck, as he would probably have beaten the record of 52 sec.; in his absence the race was won by E. O. W. Jones. The half-mile brought another new record by Etheridge in 2 min. 2 sec. The Inter-Club A XV who came in first was disqualified, as one of their team inadvertently ran inside a flag, and the race was won by the 1st XV.

The Clement Lucas Cup awarded for the highest number of points (5 for 1st, 3 for 2nd, 1 for 3rd) was won by Etheridge by one point from Kynaston, a versatile athlete who secured six seconds.

The prizes were presented by H. A. Monro, Esq., whose record for the three miles in 1892 was broken this year.

RESULTS

Three-Miles Championship.—1. A. E. J. Etheridge; 2. D. J. Lyon; 3. C. E. Sharland. Time, 15 min. 11.4 sec. (record).

440 *Yards Hurdles Championship.*—1. E. O. W. Jones; 2. A. E. J. Etheridge; 3. J. R. Lauder. Time, 1 min. 3.6 sec.

Throwing the Hammer Championship.—1. J. A. R. Smit; 2. R. U. F. Kynaston; 3. C. H. Blockley. Distance, 92 ft. 6 in.

Long Jump Championship.—1. J. M. Hanson; 2. D. M. Carnegie; 3. P. H. Birks. Distance, 19 ft. 8 in.

120 *Yards Hurdles Championship.*—1. G. D. Blackburn; 2. R. U. F. Kynaston; 3. R. W. Harvey. Time, 18.2 sec.

One Mile Championship.—1. A. E. J. Etheridge; 2. I. G. Robin; 3. P. A. Doddington. Time, 4 min. 34.4 sec. (record).

One Mile Handicap.—1. I. G. Robin; 2. A. E. J. Etheridge.

100 *Yards Handicap.*—1. G. Crabb; 2. — Rees.

Pole Vault Championship.—1. G. D. Blackburn; 2. R. U. F. Kynaston; 3. P. N. Swift. Height, 10 ft. 6 in.

Putting the Weight Championship.—1. P. S. Clarke; 2. R. U. F. Kynaston; 3. D. J. Lyon. Distance, 32 ft. 0 in.

Invitation Race.—1. Stebbings; 2. Vorster.

100 *Yards Championship.*—1. J. M. Hanson; 2. R. J. W. Rees and E. O. W. Jones, dead heat. Time, 10.1 sec.

440 *Yards Championship.*—1. E. O. W. Jones; 2. D. M. Carnegie; 3. J. R. Lauder. Time, 54 sec.

Tug of War.—Dentals beat Medicals by two pulls to nil.

High Jump Championship.—1. S. Muntarbhorn; 2. R. U. F. Kynaston; 3. D. J. Lyon. Height, 5 ft. 2½ sec.

Throwing the Discus Championship.—1. C. Wilson; 2. P. H. Denton; 3. R. U. F. Kynaston. Distance, 100 ft. 7 in.

Throwing the Javelin Championship.—1. P. H. Denton; 2. R. U. F. Kynaston; 3. A. E. J. Etheridge.

880 *Yards Championship.*—1. A. E. J. Etheridge; 2. D. M. Douglas; 3. P. A. Doddington.

Obstacle Race.—1. Poulton; 2. Southwell; 3. Harvey.

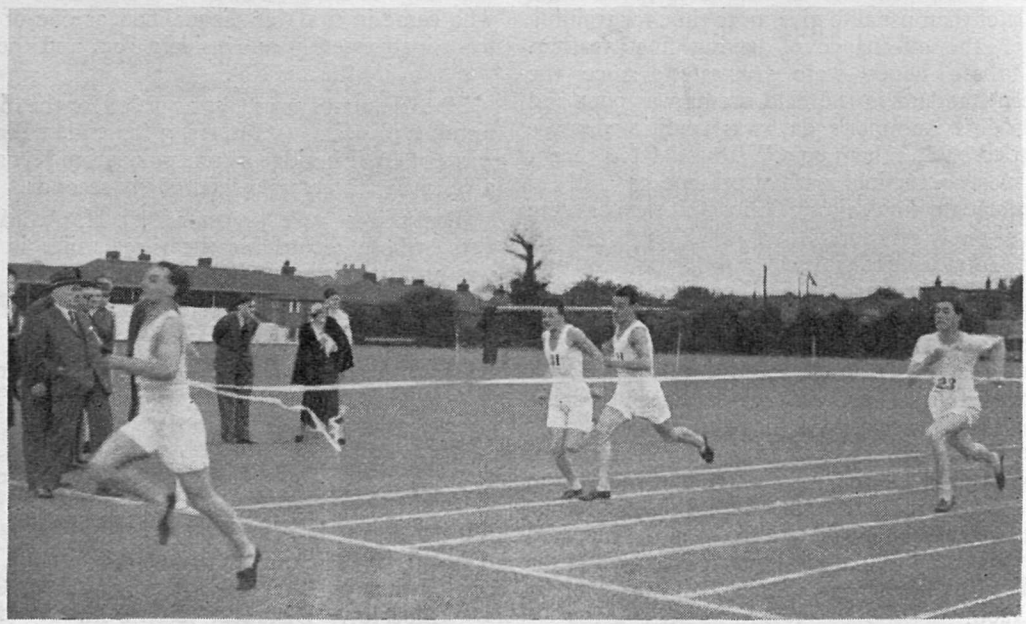
Inter-Club Relay.—The 1st XV.

220 *Yards Championship.*—1. J. M. Hanson; 2. R. J. W. Rees; 3. J. R. Lauder. Time, 23 sec.

THE LONDON UNIVERSITY CHAMPIONSHIPS

THE finals were held at Motspur Park on Saturday, May 8th. Guy's were beaten by half a point for the team championship by University College. There can be little doubt that Guy's were distinctly unlucky in that E. I. Davis strained a muscle in the heats and wisely retired from the long jump and furlong, which he was expected to retain. Furthermore, the issue was in doubt until the last race, in which Lellede (University College) and Theakston (St. Thomas's) fought out second place in the three miles. Despite the encouragement given by Guy's supporters to the latter, he was eventually beaten, and the Hospital again finished second.

The team included several new athletes, who performed very creditably, but in many cases lack of training prevented better performances. However, the entire team should be quite fit in time for the United Hospitals sports.



Finish of 100 yards Championship

In the 100 yards E. I. Davis ran superbly, coming through in the last half of the race as strongly as ever. His time of 10.3 seconds equalled the record. J. A. Hanson, a newcomer to the team, exceeded all expectations in finishing a good second. His starting is excellent, and he should give Davis even closer races later in the season.

Our representatives did not reach the furlong final. In the quarter-mile, G. G. T. Fletcher, who had performed very well in the Public School sports, was running for the Hospital. He won his heat easily, but committed an error of judgement in the semi-final by being content to run second in slow time. The unexpected event of a dead heat in one of the other heats deprived him of a place in the final. G. O'Gorman ran pluckily and reached the final but could not find the pace and was unplaced. He seemed to lack the speed which will come with further training. The same may be said of D. M. Douglas, the half-mile title holder. He was quite unable to produce any answering spurt in the last furlong, and was beaten out of a place.

Undoubtedly the finest performance was that of A. E. J. Etheridge, the Guy's captain. He turned out in the mile in order to gain points for the team, despite the fact that he had to run in the three miles later in the afternoon. He was content to beat off all opposition for second place, and did not attempt to chase A. C. Franks (St. Thomas's), who set up a record of 4 min. 22 sec.

Although Etheridge seemed quite fresh, it was thought that his efforts would affect any attempt on the three mile record. However, these fears were soon allayed for, running with great determination and maintaining excellent form, he reeled off a fast mile. Although his last two miles were slower this was only to be expected, and he really ran a remarkably even race. He finished strongly, having lapped the entire field and broken the record by 15 seconds. His time was 15 min. 1.8 sec.

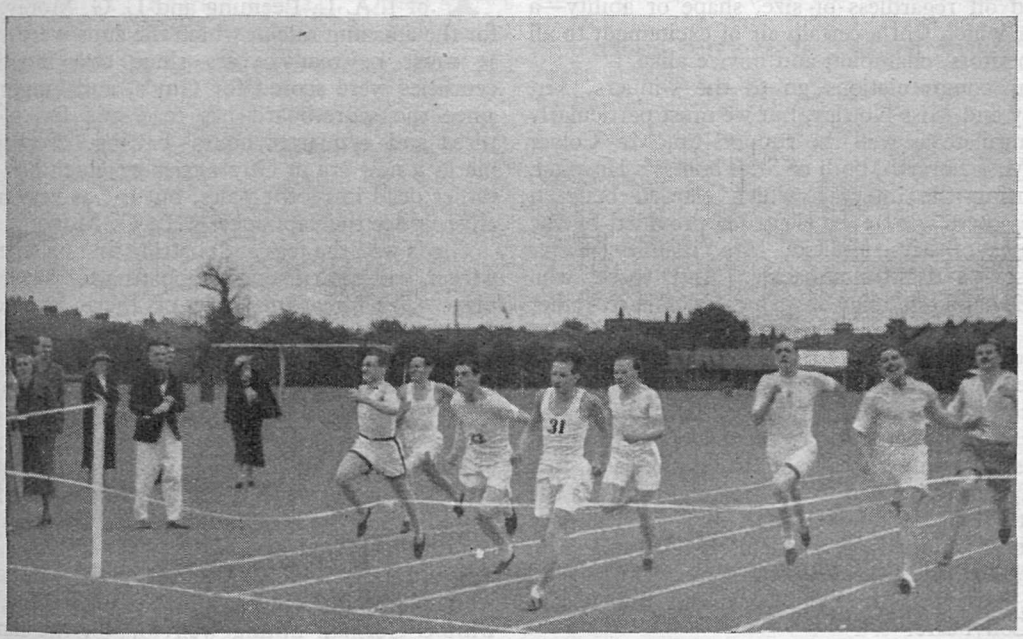
G. D. Blackburn, the former Public Schools champion, fulfilled expectations in winning the pole vault at 10 feet. The rest of the field events men entirely failed to reach the required standard, and this is undoubtedly the weakest part of the team.

D. J. L.

Swimming Club

BY the kind permission of the Clubs' Union the first dance to be held at the Pavilion at Honor Oak Park took place on Friday, June 18th, under the auspices of the Swimming Club, and proved a great success. In spite of the doubt in the minds of some as to the suitability of the Pavilion for dances, and the abominable weather outside, some ninety dancers spent a most enjoyable evening. Roger Lee's Band, though a little loud for a small hall, gave us some very good music, and the refreshments, served on the verandah, were most eagerly devoured.

We take this opportunity of thanking Mr. T. B. Layton, our President, and Mr. Philip Turner for coming along with their parties to swell our



Finish of 100 yards Handicap

numbers, and we must thank all present for their support of this first venture at Honor Oak Park. Perhaps it will not be the last.

UNITED HOSPITALS' SWIMMING GALA

On Saturday, July 3rd, at the Marshall Street Baths, the United Hospitals' Swimming Club is holding its Annual Swimming Gala. This is one of very few dress galas, and is always a most enjoyable function. The heats for the gala will be swum off on Tuesday, 28th June, and we shall then know in which events representatives of the Hospital will be swimming.

In the next issue of the *Gazette* we hope to give the results of the gala and of the Inter-Hospitals Water Polo League this season. Anyone who wishes to come along to Marshall Street on the 3rd of July should get tickets from the secretary of the Swimming Club, A. J. Drew.

K. R. T.

Lawn Tennis

FOR the last week or so Wimbledon has been all the rage, and seven days of stiff neck has culminated in the Air Display at Hendon. But we ourselves were not entirely outdone, and on Saturday, June 12th, we witnessed at Honor Oak Park one of the most enjoyable tennis tournaments that we have ever seen.

This was an American Tournament, open to all comers, with the added attraction that it was unnecessary to take a partner, for by a simple game of chance, single men and women were paired off regardless of size, shape or ability—a factor which lent a certain air of excitement to all competitors, champion and novice alike.

Our congratulations go to the winners, Mr. Piercy and Miss Nottley, but we must particularly congratulate as well the runners-up, Mr. Colyer and Miss Forsyth, both of St. Thomas's Hospital.

During the intervals which elapsed between games there was an excellent tea provided by the energies of Mrs. Bulleid, Mrs. Blaikley, Sister Johnson and Mrs. Shackle. And those who wished could indulge in games of chance rather than skill, a welcome relief from the tension of the courts run by Messrs. Wallace and Mann.

We have to thank Dr. Knott and Dr. Bruce-Pearson for the trouble they took in organising so successful a competition—there were a hundred and sixty competitors—and we understand that £34 has been handed to the Hospital funds as the result. In addition, we thank all those who gave prizes and donations, particularly Dr. and Mrs. Watt, Dr. and Mrs. Ryffel, Mrs. Frank Cook, Mrs. Pritchard, Mr. Doubleday, Mr. Bulleid and Dr. Conybeare.

We are very grateful to Messrs. W. H. James for the gift of a racquet and Messrs. F. H. Ayres, who generously supplied the balls.

X.Y.Z.

LIST OF BLUES AND HALF-BLUES

(Elected at the Blues Committee Meeting)

Rugby Football Club.—Full Blues: F. Walt, J. Forbes. Half Blues: J. P. Crawford, J. Lewis, — Williams.

Association Football Club.—Full Blues: B. M. Heap, G. M. Pearson. Half Blues: F. K. Johnson, A. D. Whitworth.

Hockey Club.—Full Blues: T. C. Thorne, J. A. L. Leeming, E. Smith. Half Blues: E. J. Needham, F. R. Buckler, B. M. Cox, S. G. McCallin, C. H. Watts, D. G. Roberts, H. P. Merrick, D. A. Hamilton, H. A. Buck, C. H. Phillips, E. J. F. Hinde.

Tennis Club.—Full Blues: F. J. Piercy, H. R. S. Harley, R. S. Stevens.

Golf Society.—Full Blues: P. D. Spooner, S. M. Whitteridge. Half Blue: P. Wilson.

Fencing Club.—Full Blue: P. H. Denton. Half Blues: W. S. Hacon, D. Lane Roberts.

Cricket

GUY'S v. LONDON HOSPITAL
FIRST ROUND, CUP-TIE

THIS match, played on Monday, May 31st, will long be remembered for the fine batting of J. A. L. Leeming and L. G. Morey, and for the amazing rate at which the runs were made. It must be many years since two individual centuries were scored for Guy's, and longer still since the score-board has read 364 for 5 after three and a quarter hours' batting. Perhaps it marks a new era in Guy's cricket, which has been rather dead in recent years, but it was very much alive under the captaincy of L. G. Morey.

Guy's won the toss and, batting first on a perfect wicket, had 240 runs on the board after two hours' play. The great majority of these runs came from Leeming, who drove with great power throughout his innings. He completed his 100 in 85 minutes and then took 46 more in a quarter of an hour, when he was caught in the deep after the partnership had put on 221 runs.

Morey, playing a more sedate but equally attractive game, was not out till 310 runs had been scored, when he was caught, after completing a beautifully played hundred.

It only remained for the rest of the side to get what runs they could as quickly as possible, and with O'Gorman hitting well for 38, the innings

was declared at 364 for 5, leaving London Hospital the huge task of getting these runs in four hours. They had time enough, but little margin for error.

Rushby and O'Gorman had little difficulty in dismissing London Hospital, only Lorrimer, who batted well for 74, showing any confidence against Rushby's cleverly varied pace and the mysterious cunning of O'Gorman, whose bowling faintly resembled Grimmett.

London Hospital were all out for 162, Guy's winning by 202 runs.

Scores.—London Hospital, 162 (G. O'Gorman, 5 for 49; J. A. Lorrimer, 74).

Guy's

J. A. Leeming, c. Coombes, b. Melville	146
L. G. Morey, c. Willey, b. Smythe	127
O. G. Lane, l.b.w., b. Barry	15
H. D. Foster, b. Barry	0
P. H. Birks, l.b.w., b. Coombes	27
G. O'Gorman, not out	38
A. C. C. Hughes, not out	9
Extras	2
Total for 5 wickets	364

C. L. T. McClintock, H. A. Thomas, A. L. Young, F. W. Rushby—did not bat.

Other results were as follows :—

Guy's beat Queen Mary's College by 56 runs on June 2nd.

Scores.—Guy's, 154 (L. G. Morey, 55; G. O'Gorman, 41; Kearley, 5 for 24). Queen Mary's College, 98 (R. M. de Gregory, 5 for 20).

Guy's beat the Olinda on Saturday, June 5th, by 3 wickets.

Scores.—Olinda, 126 (L. G. Morey, 4 for 35). Guy's, 127 for 7 (L. G. Morey, 44; A. C. C. Hughes, 20—not out).

Golf

GUY'S v. BECKENHAM GOLF CLUB

ON Wednesday, June 2nd, Guy's were entertained by Beckenham Golf Club to a match and dinner. Mr. G. R. D. Bradfield, an old Guy's man, is largely responsible for this match, which Guy's won by 5 to 3, and at the dinner afterwards Mr. Winston was present.

Results were as follows :—

Beckenham		*Guy's*	
D. Marshall (4 & 3)	1	J. C. Ritchie	0
G. J. Turnbull	0	P. Wilson (2 holes)	1
T. A. B. Ternan (2&1)	1	B. C. M. Reed	0
H. T. S. Young (3&2)	1	S. G. McCallin	0
J. F. Morley	0	K. S. Maclean (4 & 3)	1
J. H. Prudie	0	J. Braithwaite (1 hole)	1
G. R. D. Bradfield	0	P. E. Deverall (8 & 7)	1
W. G. Muller	0	P. D. Spooner (8 & 6)	1
Total	3	Total	5

GUY'S v. SIDCUP GOLF CLUB

On Wednesday, June 9th, Guy's were entertained by Sidcup to the annual fixture, and this year won quite easily by $5\frac{1}{2}$ to $2\frac{1}{2}$. The evening was greatly enjoyed by all.

Results were as follows :—

Sidcup		*Guy's*	
W. S. Taylor	0	R. D. Allen (1 hole)	1
T. E. T. Stratford (2 holes)	1	S. M. Whitteridge	0
A. G. Hyde	0	J. C. Ritchie (6 & 5)	1
R. G. Hart	$\frac{1}{2}$	P. Wilson	$\frac{1}{2}$
W. P. Taylor	0	B. C. M. Reed (2 & 1)	1
J. F. Lambert	0	T. N. Praat (6 & 5)	1
C. Salter (5 & 4)	1	P. D. Spooner	0
H. W. Astell	0	S. G. McCallin (7 & 6)	1
Total	$2\frac{1}{2}$	Total	$5\frac{1}{2}$

GUY'S v. SUNDRIDGE PARK G.C.

On Wednesday, June 16th, Guy's took a strong side down to Sundridge and hoped to record their third successive win, but instead were badly beaten by the home club. However, we were entertained very grandly and the evening was a great success.

Results were as follows :—

Sundridge Park		*Guy's*	
H. M. Morris (2 up)	1	R. D. Allen	0
F. H. Newbert (2 & 1)	1	B. C. M. Reed	0
B. H. Andrews (5 & 3)	1	J. C. Ritchie	0
B. Winnall (6 & 4)	1	T. N. Praat	0
J. C. Haigh (6 & 5)	1	K. S. MacLean	0
E. E. Webster (2 & 1)	1	S. G. McCallin	0
J. H. Cubitt (6 & 5)	1	P. E. Deverall	0
L. H. Hay	0	P. D. Spooner (6 & 5)	1
Total	7	Total	1

GUY'S v. ADDINGTON PALACE LADIES

On Wednesday, June 23rd, Guy's played a very strong team of ladies at Addington Palace, and, being weak themselves, were unable to concede the six strokes (the usual penalty) and get away with it. However, we all enjoyed the match.

Results were as follows :—

Addington Palace Ladies		*Guy's*	
Miss Vanson	0	B. C. M. Reed (1 hole)	1
Mrs. Puckering (4&2)	1	T. N. Praat	0
Miss Tozer (5 & 4)	1	P. D. Spooner	0
Miss Haycock (4 & 3)	1	K. S. MacLean	0
Miss Radford (3 & 2)	1	E. S. Foote	0
Miss Barker (3 & 2)	1	J. Astbury	0
Miss Whitehead (1 hole)	1	A. L. Walton	0
Miss Jell	0	S. E. Burt (2 holes)	1
Miss Foucar	½	R. Hudson-Evans	½
Total	6½	Total	2½

Nursing News

At a distribution of prizes in the Nurses' Home by Lord Nuffield the following awards were made :—

The Keogh Prize (for the Surgical Examination)—
Nurse E. M. Surridge.

The Morrison Prizes (for the three examinations in Nursing Subjects)—
August, 1936—Nurse C. M. Baker.
December, 1936—Nurse E. M. Hollands.
March, 1937—Nurse B. T. Taylor.

The Bernard Loftus Brown Prizes (for the Final Practical Nursing Examinations)—
May, 1936—Nurse B. M. Hill.
November, 1936—Nurse E. M. Mason.
February, 1937—Nurse K. E. Alkin.

The Governors' Prize (for the Examination in Special Diseases)—
Nurse N. Reed.

The Governors' Prize (for the Examination in Pharmacology and Dispensing)—
Nurse M. I. Collins.

The Metcalfe Prize (for the Examination in Medical Subjects)—
Nurse M. Cussens.

The Casenove Gold Medal (awarded to the Nurse gaining the highest aggregate percentage of marks in all the examinations)—
Nurse P. M. Walker.

Hospital Information, etc.

Notices

BEANEY SCHOLARSHIP IN MATERIA MEDICA

The Beaney Scholarship in Materia Medica (including under that term Pharmacy, Pharmacology and Therapeutics) is now vacant. The Scholarship, which is open to candidates who have received part, at least, of their medical education at Guy's Hospital, is of the annual value of £60 and is tenable for three years.

Further particulars may be obtained from the Dean, to whom applications must be addressed not later than July 17th.

T. B. JOHNSTON, *Dean.*

FINAL F.R.C.S. COURSE

The next course of instruction in preparation for the Final Examination for the Fellowship of the Royal College of Surgeons will begin on August 30th. Guy's men who wish to attend the course should give in their names to the Medical School Office as soon as possible.

T. B. JOHNSTON, *Dean.*

Pass List

ROYAL COLLEGE OF SURGEONS.
F.R.C.S. June, 1937.

V. H. Barnett	I. G. C. Ford
C. F. Critchley	S. K. Merron
H. G. N. Cooper	F. R. Yousry

Papers by Guy's Men

Robert Cutler. Day-to-day problems in regulation treatment. *Brit. Dent. Jour.*, 1937, lxii, 617.

H. W. Barber. Changes in the pilosebaceous follicles and sebaceous secretion following herpes zoster. *Proc. Roy. Soc. Med.*, 1937, xxx, 975.

Births

MILLER.—On June 16th, 1937, to Dorothy (née Davies), wife of W. H. Miller, M.B.—a daughter.

BERKLEY.—On June 23rd, 1937, at "Applegarth," Leigh, near Tonbridge, Kent, to Beryl, wife of Ernest Albert Rochester Berkley, M.R.C.S.Eng., L.R.C.P. Lond.—a son.

Marriage

HINDLE—NORTH.—On June 19th, 1937, at St. John's Church, Bexley, by Canon J. N. Mallison, J. R. C. Huddle, L.D.S., R.C.S.Eng., son of Mr. and Mrs. J. W. Hinde, of Bexley Heath, Kent, to Evelyn, daughter of Mr. and Mrs. Arthur North, of Bexley Heath.

Death

HUGILL.—On May 26th, 1937, George Frederick Hugill, M.D.(Durham), M.R.C.S., L.R.C.P., Elmfield House, Balham.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

WITH apologies to "Beachcomber" and in sympathy with world affairs generally and our own minds in particular, we had thought of printing this page upside down, for at the moment we live in the midst of great changes.

Mr. Eason has departed, and on another page we publish an appreciation of his work here, together with a recent photograph, as but a small tribute to his great services on behalf of the Hospital, and in gratitude for unfailing readiness to help us in the production of this paper.

Mr. Eason's resignation has left a gap which it is not easy to fill, and, though Dr. J. J. Conybeare has kindly accepted the not very enviable task of acting as Superintendent temporarily, we understand there is still doubt as to who will ultimately succeed to the post. Indeed, it is rumoured that there may be what we believe is technically known as a reshuffle among the higher administrative posts, both in the Hospital and the Medical School, but in the meantime, dear readers, like you, we can only indulge in mild speculation.

▭

EVERYONE lately has been discussing the inevitable breakdown of the scheme for Non-intervention in Spain; however, in our own eyes this disaster has been largely offset by our delight at hearing once more of our old friend "Potato" Jones. It is true that he has changed the name of his ship and now prefers just plain Jones to his picturesque title, but it is good news to hear that the old rascal is still at large and hope to report more of his adventures before long. Of "Corncob" and "Ham and Eggs," further members of this fine seafaring family, alas, there is no news.

But while on the subject of politics, we note that in this week's *Intestinal Echo* Captain Farragut says the trouble with people to-day is too much wind and not enough action. We are at a loss to know whether he was referring to matters mental or fundamental, but were glad to hear from this intrepid soldier, whose gallant effort to break down the overwhelming obstruction to a scheme of renovating the College we still remember.

▭

WE offer our congratulations to Mr. H. J. B. Atkins, M.Ch., F.R.C.S., upon his appointment to the Staff as an additional Assistant Surgeon. He has had an exceptionally brilliant career, which has culminated in this appointment at the early age of thirty-two. It will not be out of place to capitulate his achievements to date. He is the son of an old Guy's man, Sir John Atkins, K.C.M.G., K.C.V.O., who has himself attained considerable eminence in the profession, and was educated at Rugby and at Trinity College, Oxford. While at the latter he obtained the Commoner's Exhibition in 1928, the Radcliffe Scholarship in 1929, and gained first-class Honours in Physiology. He entered Guy's in October, 1929, having been awarded the War Memorial Senior Science Scholarship. He passed his Primary Fellowship with great ease, and was in due course elected a Fellow. Later on he received the degree of Master of Surgery at Oxford, and has for several years held the post of Surgical Registrar here. Mr. Atkins' latest distinction—one which he shares with Mr. R. C. Brock and Mr. T. F. Todd—is his election as Hunterian Professor at the Royal College of Surgeons, and we would congratulate them all upon this honourable appointment.

▭

WHILE the Peers of the Realm sit in benevolent dispute over the grounds for divorce, a sudden wave of matrimony has swept over the College. Croaking crickets are courting cautiously beneath the floor-boards, the ever amorous pigeons are by no means tired, while domestic relations even among the cats seemed to have assumed a more settled nature, which we hope soon to regard as permanent.

However, in a week of international uncertainty we are grateful for any excuse to turn to the more

cheerful side of life, and are delighted to announce that two marriages have been arranged recently between important people at this Hospital.

Dr. P. M. F. Bishop, who is well known, both as a physiologist and for his work in the field of Clinical Endocrinology, has just announced his engagement to Miss Phyllis Thurston, who for several years has been a valuable member of the administrative staff of the Hospital, and we understand that the wedding will take place shortly. We consider them both extremely fortunate, and offer our sincerest congratulations.

The other engagement is between Dr. J. A. J. Hammond, a former House Physician to Dr. Poulton and more recently still a Resident Obstetrician, and Miss Lyle, a member of the Nursing Staff. To them also we offer our congratulations and good wishes.

INFURIATING as the telephone service is, with its infinite capacity for providing any number but that required, for obtaining twopence under false pretence, for ringing in the night, and a hundred other playful habits carefully calculated to annoy, we must admit that the authorities do everything in their power to make waiting a pleasure. In almost every kiosk there is a lamp to read by, an ash tray for the smoker, and lately, more lovely still, a mirror and a rack to put the parcels in. However, we doubt if anywhere in the world of telephones is the comfort more luxurious than that which was lately provided for those who chose to use the box at the foot of the stairs in the Medical Block, where we noticed that a row of beds had been provided for the use of sleepy subscribers. We cannot think but that this was a gesture of some kindly authority, and, on behalf of the cats and the many users of this box, we would like to express our gratitude.

So the Archbishop did fumble, did he? The whole explanation of the extraordinary contortions described by His Grace before the Crown finally came to rest on His Majesty's head in the Coronation ceremony, appeared in the popular press recently. Apparently there was some uncertainty as to which was the front and which the back, and the procedure of turning it round and round and looking at it from every angle which His Grace adopted was an attempt to overcome this difficulty, and not, as one old lady seems to have thought, a ceremony of blessing each corner of the royal emblem. We thought as much ourselves, and shared the relief of the Archbishop when the crown finally came to rest the right way round.

THE awful distortion of the human voice by the telephone and the importance of distinct articulation is one lesson to be learnt from this pithy little story :—

One of the Night Sisters entering the Nurses' Home was told by a maid that the following message had been sent by telephone from one of the wards :—

" Can nurse have thirty minutes in the pantry? "

Mildly surprised, the Sister rang up the ward to inquire about this rather unusual request, and was then told that the nurse really did not need a quiet half-hour in the seclusion of the pantry, but would be very grateful if she might give thirty minims of Nepenthe, which only goes to show the folly of preserving obsolete terms, however attractive they may sound.

An Appreciation

HERBERT LIGHTFOOT EASON, C.B., C.M.G., M.D., M.S., F.R.C.S.

FOR some time past now there has been a curt placard outside the Superintendent's Office pointing out that no single one of us is indispensable to the world. No doubt that is true enough, but occasionally there are men who seem so fitted to their job in life that it becomes a personality rather than a title, and man and job together come to be regarded as an institution that is by no means easily dispensed with.

That is how we had come to look upon Mr. Eason, the late Superintendent of the Hospital, who has left us recently and whose resignation must have been bitterly regretted by all, save, perhaps, the authorities of the Univesity of London, who alone are entitled to a smug smile of satisfaction, anticipating, as we feel sure they may, an era of well-ordered efficiency while Mr. Eason remains Principal of their University.

Here at Guy's we live in a narrow world of our own, with its petty problems, its tragedies and triumphs, and the inevitable undercurrent of institutional intrigue, presided over by a sort of universal arbitrator, in the person of the Superintendent, whose business it is to combine our tangled mass of effort, and to administer the working of the Hospital as a whole—a task that is by no means simple, and it was once remarked to us, vulgarly, but nevertheless with a certain aptitude, that the Superintendent " holds the baby " for the whole Hospital. Well, Mr. Eason held it for

seventeen years; in itself a long period of time, but when it is remembered that during those years there have occurred such major crises as the General Strike of 1926 and the financial slump of 1931, it is perhaps no exaggeration to regard this as one of the most crucial periods in the whole history of the Hospital, and now, at the close of his active career at Guy's, we like to think that Mr. Eason may well be proud of his charge, and we ourselves are grateful for his care.

Mr. Eason, who, incidentally, celebrated his sixty-third birthday on Thursday last, July 15th, had a most varied career and many interests quite apart from medicine. He entered Guy's as a student in October of 1893 and qualified with the diploma of the Conjoint Board five years later, after which he became a graduate of the University of London, and received the degrees of Doctor of Medicine and Master of Surgery during the first two years of this century. He then seems to have turned his attention to the administrative and teaching side of the Hospital, and was appointed Warden of the College in 1902 and Dean of the Medical School in 1903, a post which he held until just before the War.

For several years then he had been specialising in ophthalmology, and in 1905, just seven years after he had qualified, he was elected to the Staff as an Assistant Ophthalmic Surgeon at the age of thirty-two—a feat which, if it is not unique, at least serves to show that his talents were appreciated from a very early age.

The following year, Mr. Eason was appointed a full Ophthalmic Surgeon to the Hospital, and remained in charge of the Ophthalmic Department here, in conjunction first with Mr. Ormond and, in later years, with Mr. Morgan, until the time came for him to retire from the active Staff of the Hospital in 1934, when he attained the age of sixty.

During the Great War Mr. Eason acted as Consulting Ophthalmic Surgeon to His Majesty's Forces in the Mediterranean and Egypt from 1915 to 1919, during which time he rose to the rank of Lieutenant-Colonel in the Royal Army Medical Corps, and was made a Companion of the Order of St. Michael and St. George, and later a Companion of the Order of the Bath for his services.

As a result of his experience with the Army in the East, he published several interesting papers, which appear under the titles of "Ophthalmic Practice in the Mediterranean and Egyptian Expeditionary Forces," in the *Guy's Hospital Reports*, Vol. 20, and "Military Ophthalmia in Egypt," in Vol. 38 of the Transactions of the Ophthalmic Society.

When the War was over, Mr. Eason returned to Guy's, and on February 1st, 1920, he was appointed Superintendent in succession to Sir Cooper Perry, thus beginning the unenviable task of following in the footsteps of a great personality and a greater reputation, and it is perhaps the highest compliment that could ever be paid to Mr. Eason to say that he accomplished this task.

Essentially an energetic brain, a rapid thinker, and a master of organisation, it was not long before Mr. Eason's ability began to be appreciated outside, as well as inside, the Hospital, and during the years he lived in the Treasurer's House, his circle of interests became steadily wider and wider, and in later years his daily round of routine duties must have been immense. For not only was he a local Justice of the Peace, and a Consultant Ophthalmic Surgeon to several hospitals, including St. John's, Lewisham, but somehow he also found time to represent the Ministry of Health on the General Nursing Council, and the University of London on the General Medical Council, of which he was also Junior Treasurer.

But, outside Guy's, it was the University of London that occupied most of Mr. Eason's time, and, after representing the Faculty of Medicine both in the Senate and in the Court, he was elected in 1936 to the Vice-Chancellorship, an office which he held until his recent appointment as Principal in succession to the late Sir Edwin Deller.

As a writer, Mr. Eason was not prolific, a fact that is not really surprising considering his manifold activities, but on the rare occasions when he was stimulated to write, he was always both lucid and interesting, and the main impression all his articles and letters left in our minds was a wish that he would write more; in fact, we feel sure that an account of his experiences as Superintendent would be a story of uncommon interest, and hope that his unique collection of anecdotes relating to the Hospital may not remain concealed for ever.

Apart from the articles written in connection with his experiences in the War, Mr. Eason was responsible for the section on ophthalmology in Dr. French's "Index of Differential Diagnosis," and at one time contributed fairly frequently to the *Guy's Hospital Reports* and to the various medical journals.

However, it was as Superintendent that we knew him, and it will be as Superintendent that we shall remember him. A man with an extraordinary grasp of the detailed working of our Hospital; a most determined man, yet ever ready to see another point of view. A man with endless calls upon his time, yet one who was never too busy to listen. Mr. Eason was the head under which the various departments of the Hospital

were united and the main point of contact between the Hospital and the outside world.

Whether it was an ungrateful and complaining patient, angry relatives, or a dissatisfied doctor, the matter could be safely left to the " Super.," with the certainty that the trouble would be rapidly smoothed away, and it was sometimes quite astonishing on these occasions to find out what a vast knowledge he possessed of local trivialities, which might well have passed beneath him. This, coupled with a valuable gift of appearing always quite impartial, no matter how firmly his mind was made up, were weapons that rarely failed.

Men are often judged by the way they treat their servants, and more often still by the way their servants treat them, but from the highest to the lowest in this Hospital there can have been few who had not benefited by Mr. Eason's wisdom, and fewer still whose respect he did not hold. Small wonder then that he came to be known as the father of the Hospital, a title often abbreviated with affection and no great detriment, and we feel that perhaps for the first time ever we are recording the united opinion of the whole Hospital when we say that in Mr. Eason, Guy's has lost one of the wisest counsellors it ever had.

" If you or I, or the man you think
indispensable,
Were to depart to-morrow,
The work would go on just as well,
Perhaps better."

That we shall have to believe now, and take comfort from the fact that Mr. Eason at least remains a member of the Consulting Staff and a Governor.

We have received the following note of appreciation from a Member of the Administrative Staff.

No branch of Thomas Guy's large family will have more appreciative memories of Mr. Eason as Superintendent of the Hospital than those whose work is chiefly done " behind the scenes " —the Administrative Staff and the Staff of the Works Department. These will every one of them remember with gratitude that during the years that he has been Superintendent he has unfailingly stood their friend. His readiness to hear their point of view, his fairness, and his kindness will not easily be forgotten by those who were fortunate enough to come under his rule. He was always accessible even to the most junior of his staff, and anyone who approached him could be sure of their grievance—if they had one—having a fair hearing. Incidentally, he usually arrived at the point of their story long before they had really grasped it themselves. Mr. Eason had an amazing knowledge of everyone's particular job, and could often describe the work of a member of his staff without apparently ever having seen it done. Those who attended the Employees' Association Biennial Dinners at which he always, sometimes at great personal inconvenience, presided, must have been astonished at the knowledge he displayed of their activities. It seemed that he could be a carpenter or an almoner with equal ease! And no one could be more scathing of work badly done or more generous in praise of work well done.

The workers " behind the scenes " would like to take this opportunity to convey to Mr. and Mrs. Eason their deep appreciation of their many kindnesses and interest in their welfare. They rejoice to feel that as a Governor of the Hospital he will still stand their friend.

Before long, members of the Nursing, the Administrative and Works Department Staffs will gather in the Court Room to express their appreciation personally of the many kindnesses received from Mr. and Mrs. Eason.

Obituary

DAME SARAH SWIFT, G.B.E., R.R.C.

A GREAT little figure has vanished from amongst us. Dame Sarah Swift, known to countless generations of Guy's men and women, died at her home, Melcombe Court, London, W.2, early on Sunday morning, June 27th, at the age of 83, after an illness lasting only two weeks. She was tended to the last by her devoted maid Mabel, and her life-long friend Mrs. Spawforth Holt. The funeral service was held at St. Mark's Church, Marylebone, followed by cremation at the Golder's Green Crematorium, and by her wish her ashes were scattered in the lovely grounds of the crematorium.

Sarah Swift was born at Kirton, near Boston, Lincolnshire, on November 22nd, 1854, the daughter of a landowner and farmer of that neighbourhood. Nursing attracted her, and in 1877 she entered the Dundee Royal Infirmary as a Probationer. After completing her training, she held posts of responsibility in the Dundee Royal Infirmary, the Liverpool Fever Hospital and the London Fever Hospital. She visited New York,

and between 1888 and 1890 was Sister at the Seamen's Hospital, Constantinople. From Turkey she came to Guy's Hospital, first as a lady pupil, and then as " Sister Sarah," Superintendent of the Guy's Trained Nurses' Institution, from whence she dispatched private nurses all over the country and inspired them in their work.

Dame Sarah Swift

From 1901 to 1909 Miss Swift held the post of Matron at Guy's Hospital, following Miss Nott Bower and Miss Esther Young. She was a firm and just disciplinarian, had a keen sense of duty, and inspired her nurses. She had a modern outlook, far in advance of her years, and advocated healthy exercise and open-air recreations for nurses at a time when, in most hospitals, they were not considered necessary. The Nurses' League, which was started just before she became Matron, developed and expanded under her rule; swimming, cycling and tennis clubs were inaugurated, and debating, musical and photographic societies were encouraged.

Dame Sarah was of tiny stature—under five feet—but she held herself with great dignity and spoke quietly and impressively. No one could leave her presence without having felt the force of her character, though personally she was retiring, modest and absolutely unselfish. While she would not hesitate to fight with determination for any cause which she thought just, and while she took an active part in public life in connection with Health Services and Benevolent Societies, she would never indulge in any luxuries or advantages for herself, and she would slip away unobtrusively from a gathering, refusing a lift in anyone's car; much preferring to go home by bus. One of her favourite remarks, when difficulties were brought to her by her staff, was: " Never mind—you must manage," but when she had sent you away prepared to endure the worst, she would send unexpected help after you.

She was a Dame Grand Cross of the British Empire, held the Royal Red Cross decoration, and was a Lady of Grace of the Order of St. John of Jerusalem. During and after the War she was Matron of the Nursing Departments of the British Red Cross Society, and on one or two occasions visited and inspected the British Red Cross Hospitals working in the war areas in France and Belgium.

One of the great actions of her life was the part she took in the formation of the College of Nursing, bringing to Sir Arthur Stanley, Sir Cooper Perry and one or two others her wide knowledge and experience of nurses in many different parts of the world, and drawing attention to their need for registration, and the help of their own professional organisation.

The College of Nursing took root and grew. After the War the Women's Tribute Fund helped to endow it, together with its first cousin the Nation's Fund for Nurses, and Lady Cowdray became interested in it. Dame Sarah took a leading part in all these activities, holding the office of President from 1925 to 1927, and serving for many years as one of its honorary treasurers.

It is not possible to mention the many nursing and other activities which were helped by Dame Sarah's help and counsel. She was one of the prime movers in the establishment of a trained nursing service for H.M. Prisons, and became Chairman of the Voluntary Advisory Nursing Board at Holloway Prison. She continued after the War, and until 1935, as Matron-in-Chief of the Nursing Division of the British Red Cross Society. She took a prominent part in the work of the Nation's Fund for Nurses, the Cowdray Club, the Junius S. Morgan Fund, the Florence Nightingale International Foundation, the Central Council for District Nursing, and of some of the constituent societies of the National Council for Maternity and Child Welfare.

Generations of the older Guy's nurses learnt what resolution, a wide-minded outlook, an indomitable courage in the face of difficulties meant through their association with her, and her name is remembered also with affectionate admiration by many Guy's men of her time.

A Memorial Service was held in the Guy's Hospital Chapel on Thursday, July 1st, at 1.45 p.m. Canon Haldane, Rector of Southwark Cathedral and Chaplain to Guy's Hospital, gave an address. The Chapel was filled with many of the older members of the Consulting and Hospital Staff and representatives of the many societies with which Dame Sarah worked. In the Gallery about eight or ten of the older men and women employees of the Hospital, from the Works Department and from the staff of portresses, came to pay their last tribute to the woman who had known them, who had worked with them, and, in many cases, engaged them many years ago. As the congregation left the Chapel the old famous words of the Lesson rang in their ears :—

" Let us now praise famous men, and our fathers that begat us . . . Such as did bear rule in their Kingdoms, men renowned for their power, giving counsel by their understanding."

E. MacM.

Observations on Genital Prolapse

A Clinical Lecture delivered at Guy's Hospital on 5th July, 1937, by Frank Cook, Esq., F.R.C.S., F.C.O.G., Obstetric Surgeon to Guy's Hospital

GENTLEMEN,—We all know, or ought to know, that the term " genital prolapse " is convenient rather than accurate. We also know that it includes a variety of abnormal conditions. On the other hand, the term " uterine prolapse " is misleading, inasmuch as the uterus itself is not actually prolapsed in most cases of pelvic floor descent. Indeed, the latter is a dangerous term, since it has tempted misguided surgical enthusiasts to remove the apparently offending organ and thereby to accentuate the weakness of the pelvic floor. Women naturally tend to blame their wombs or ovaries for all the troubles under the sun, an idea that is endorsed by far too many of their medical advisers. " And if thine eye offend thee, pluck it out, and cast it from thee." No one has a greater and more sincere respect than I for every word that is written in the Gospels ; but I am quite certain that we are not intended to accept this injunction as a surgical precept. Even though the uterus itself be prolapsed and a condition of procidentia obtain, hysterectomy *per se* is the equivalent of attempting to cure a hernia by mere removal of the contents of its sac. Since we are quoting the Scriptures, let me seriously direct your attention to the advice of St. Paul : " Prove all things ; hold fast that which is good." Incidentally, St. Paul knew a great deal about women—far more than most of our present-day theologians, who seem to be obsessed with sex affairs which they completely fail to understand.

As a general rule, genital prolapse is a result of childbirth. Let us frankly recognise that the human female is not as yet adapted to the upright position, any more than she is adequately adapted to the stress and strain of modern life. Nor are men, so far as the latter burden is concerned, although we are not called upon to endure the trials and tribulations of her sex. Prolapse is not invariably an aftermath of labour. There is a type of uterine descent, known as " vault prolapse," in which the uterus itself projects, after the manner of an intussusception, in spite of the comparatively sound pelvic diaphragm that is found in nulliparous women. In these cases there is not uncommonly an antecedent or congenital hypertrophy of the cervix, and undue physical stress has usually been superimposed upon a debilitated frame.

More frequently the primary defect lies in the pelvic floor proper, and it is directly or indirectly due to labour. The earlier manifestations are cystocoele or rectocoele, which may or may not be accompanied or ultimately followed by true prolapse of the uterus, in accordance with the impairment or integrity of the transverse cervical or cardinal ligaments. Forceps deliveries have been blamed for the incidence of prolapse, but this proposition is at least debatable. Unfortunately for gynæcologists, prolapse is essentially a disability of the hospital classes ; whereas, in the ordinary course of events, forceps deliveries are somewhat of an expensive luxury, in spite of strict obstetric ethics as propounded by your teachers and examiners. Of course it is asking for trouble, immediate and future, to apply forceps before the cervix is fully dilated, just as it is mutilating to attempt forcibly to expel the placenta before it has separated. But on the whole it is probable that an unduly prolonged labour is at least as damaging in effect as its instrumental curtailment ; and, on the other hand, direct injury, however regrettable, rarely leads to serious prolapse. Women with persistent

third-degree tears almost invariably escape the final insult of prolapsus uteri, since the poor souls are forced to bring their levators into action in the absence of true sphincteric control. There is not the slightest doubt that genital prolapse in general is a class affliction of that multitude of women who rise from their beds on the tenth day after confinement and proceed forthwith to their heavy household duties. Upon this point I have two observations to make. In the first place, it is not *our* profession that beats them up on the tenth day, as many propagandists and busybodies would have us believe; it is a matter of popular tradition and of economic necessity. And, in the second place, it *might* be better if they got up on the *first* day, failing ideal conditions. We are always being told that the "natives" conduct their obstetric affairs much better than our more enlightened communities. This latter opinion is demonstrably absurd; but we must admit that the levators may respond to coercion, whatever the discomfort involved.

A complete anatomical survey is precluded by the scope of this lecture, but there are a few essential factors that we cannot neglect to consider. In some respects the observations of gynæcological surgeons are at variance with the descriptions provided in anatomical textbooks. Perhaps I may be allowed to suggest on behalf of the former and without disrespect to the latter (*a*) that the anatomists appear to have given considerably more attention to the male pelvic floor than to that of the female, although the latter is rather obviously of greater surgical and general importance, and (*b*) that anatomical dissections are not infrequently conducted on ancient and pickled subjects, as contrasted with the living and comparatively young women upon whom we have to operate. Probably we are entirely in agreement with regard to the structure and importance of the muscular pelvic floor or diaphragm, which consists of the levatores ani and coccygei. But this can only afford indirect support to the uterus itself when that organ is occupying its usual position. In cases of "vault" prolapse and of "retroposition," the pelvic floor proper may be perfectly intact, whilst the uterus is considerably displaced below its normal level. On the other hand, there are many cases of pelvic floor defect, accompanied by extreme degrees of cystocoele and rectocoele, in which the uterus itself is found to be firmly supported in position by structures that are other than the widely separated levators.

Anatomists are reluctant to admit the importance of the lateral vaginal, transverse cervical, or "cardinal" ligaments. These consist of an expansion of reinforced pelvic fascia, extending from either side of the pelvic basin to the cervix, vaginal vault and upper part of the lateral vaginal wall. They form a stay or sling which substantially maintains the position of the vagina and uterus. They are perfectly evident to those of us who continue to perform Wertheim's hysterectomies. And they are not to be confused with the fascia which is said to surround the uterine artery in the horizontal part of its course. The uterine arteries lie well behind the cardinal ligaments, and their fascial sheaths are negligible. The round ligaments and utero-sacral ligaments afford very little support, although they assist in maintaining anteversion. The latter are brought into prominence by the corresponding fold of peritoneum, but merely consist of a little connective and fatty tissue with a few muscle fibres. There is, however, a musculo-fascial layer of very considerable value between the bladder and the anterior vaginal wall. This is regarded by anatomists as an unimportant vesico-vaginal layer of the visceral pelvic fascia. It is usually termed by gynæcologists the "pubo-cervical fascia." Any defect or undue stretching of this structure plays a major part in the causation of cystocoele, and in that condition of "stress" or "strain" incontinence which is due to sagging of the urethra. The effective treatment of these conditions involves the repair or tautening of this musculo-fascial layer.

For the various types of genital prolapse I will refer you to the textbooks. There is one point, however, that deserves recognition. Patients suffering from well-marked cystocoele rarely complain of strain incontinence. Apart from the "womb coming down," their trouble is diurnal frequency. Should they complain of frequency by night as well as by day, there is probably an element of cystitis in addition to the mechanical factors concerned. In cases of strain incontinence, a distressing and not uncommon sequel of difficult labour, the prolapse is usually confined to the urethra and to the neck of the bladder only. Unfortunately, the term "urethrocoele," though convenient, may be misleading. Bladder discipline in the female always seems to me to be somewhat of a miracle; it mainly depends upon the integrity of the pubo-cervical fascia and appropriate angulation or alignment, since true sphincteric control would appear to be practically negligible.

The symptomatology of prolapse raises a number of problems of general interest, and on that account I will try to avoid the more obvious details. For present purposes we will first dismiss the large army of neurotics, those unfortunate ladies whose ill-balanced minds are centred on their pelvic organs, and of whom we

gynæcologists see far more than our share. Beware of operating on a neurotic or neurasthenic woman for prolapse, even though the mechanical disability be quite genuine. Pass her over to a psychiatrist, *if* she will go—or, alternatively, to your enemy. In the first place, colpo-perinæorrhaphy and the sequelæ thereof have a truly shattering effect upon an unstable nervous system; and secondly, she will blame you, the surgeon, for every subsequent ill that may befall her, whether it be real or imaginary. This advice does not apply to any of you who are saints of infinite patience, or good salesmen of thick skin.

Now, quite apart from the neurotic multitude, we are apt to find a very considerable disparity between the severity of the symptoms and the degree of mechanical defect, even in the most sensible women. One woman, in whom the prolapse may appear to us to be comparatively slight, will complain of genuine discomfort; whereas, in another woman, we may find an extreme prolapse of one type or another merely in the course of a routine examination. It is suggested that the progressive prolapse, however insignificant to the observer, may cause more inconvenience to the patient than that which is already well established, since she is constantly attempting to control the former, consciously or subconsciously. Bearing these points in mind, and when considering treatment, we naturally tend to ask the patient herself whether she considers surgical measures desirable or justifiable, since we must recognise that comfort rather than prolongation of life is the ultimate aim of treatment in this connection. Although the woman alone is aware of her present degree of discomfort and inconvenience, she will almost invariably reply: "Is an operation really necessary?"—particularly if she be of the hospital class. To this you may quite properly say "No"; but that is not the end of the matter. As a rule, patients expect us to make up their minds for them, even in cases where the decision is logically due to them. They are not in the least concerned with our professional consciences, since they generally assume that we are honest, however critical they may appear to be. So far as private patients are concerned, we must remember that most women are decent souls, and they are really considering the loss of working time involved, and the cost to their husbands. It is easy for us to be emphatic as to the advisability of an operation for cancer, but it is not easy to decide in a case of prolapse, where so many clinical, surgical, psychological and economic factors have to be taken into account. But that form of judgment is the hall-mark of a good doctor, particularly if it be combined with technical skill. Any fool can diagnose a prolapse apart from its context.

Next we come to the fallacy of coincident phenomena, which has some bearing on our subject. When two or three things happen to occur round about the same time, including such diverse manifestations as symptoms in different parts of the body, accidents, therapeutic inflictions, unemployment, bankruptcy or bad weather, most out-patients and many of their medical advisers insist upon attributing the whole collection of adverse events to one somatic causal factor, such as the "kidneys," the "acid," or the "womb"—more particularly if they can, in so doing, attach blame to some individual. This fallacy mainly depends upon bad logic or the one-track mind, and to diabolically clever patent medicine advertisements. But it also depends upon the fact that we, as a profession, have been taught to avoid as the plague any diagnosis involving a "double pathology." This teaching has led to thousands of unnecessary disasters, for there is no earthly reason why a person suffering from flat feet, renal calculus, and post-alcoholic remorse, should not also have an early carcinoma in some part of his or her body. It has also led to thousands of unnecessary and useless operations.

Paradoxically enough, even our learned piecemeal investigators always seem to aim at a single comprehensive diagnostic label, in spite of their manifold opportunities. Lest you should think these observations irrelevant, and lest you should regard my one example as an anticlimax, I will plead the extreme frequency of the syndrome that I have in mind. On the other hand, in this instance the fallacy is less obvious and more dangerous, inasmuch as there is an apparent anatomical relationship between the somewhat mundane manifestations. Many women suffering from general debility, overwork or underwork, neurasthenia or neurosis, backache, visceroptosis, constipation, and the inevitable vaginal discharge, are found to have cervicitis, prolapse, and possibly retroversion. Which is the cart and which is the horse? The answer is never simple, and almost invariably more than one line of treatment is indicated. It is true that many of these signs and symptoms may be due to a common causal factor, *e.g.*, childbirth; but this does not imply that the backache, for instance, is directly due to the cervicitis or to the uterine displacement, as so often is assumed. Many an apparently good general result from an operation for prolapse is mainly due to the fact that the patient has a three-weeks' rest in bed for the first time for years. My distinguished friend and colleague Victor Bonney has stated that when in doubt one should start at

the bottom. But, like many of the greatest surgeons, his outlook is largely mechanical. Gynæcological problems of this nature are of no particular scientific interest, but they are of the utmost importance to the individual woman concerned; and I still submit that clinical judgment represents the highest pinnacle of our art and craft.

I have taken up much of your time in giving expression to rather vague generalities, and beg to conclude with a few bald statements.

Repair of the pelvic floor alone is insufficient to cure prolapse of the uterus as such. This requires either the Manchester (Fothergill's) operation, which comprehends the cardinal ligaments, or a combination of the ordinary anterior and posterior colpo-perinæorrhaphy together with ventrofixation of the uterus (the " round trip " operation). The main objection to the latter procedure is that it necessitates laparotomy with the attendant risks thereof, however slight they may be.

Ventrofixation alone is useless in so far as the treatment of prolapse is concerned.

In the treatment of cystocoele, never perform an anterior colporrhaphy only. Always supplement this procedure with a posterior colpo-perinæorrhaphy.

Le Fort's operation, in which the vagina is obliterated, should be reserved for very old ladies.

It is not advisable to perform any plastic operation upon the pelvic floor within four or five months of childbirth, as healing is rarely satisfactory. In later cases healing is excellent as a rule, and remarkable in view of the proximity of the rectum—such is the " local immunity " of the tissues of the pelvic floor.

Patients commonly and unfortunately suffer considerably from pain for four or five days after the operation, whatever measures we may adopt. It is advisable to warn them of this beforehand, lest their pain should be accentuated by anxiety and natural resentment.

Colpo-perinæorrhaphy imposes a more severe nervous strain upon a sensitive patient than an abdominal operation, such as hysterectomy. (You will not notice this in hospital.)

The end results of operations for prolapse in well-chosen cases are highly satisfactory.

Cataract

Portion of a Clinical Lecture delivered at Guy's Hospital by Frank W. Law, Esq., M.D., M.Ch., F.R.C.S.

GENTLEMEN,—I would like to discuss with you to-day the subject of cataract, which by definition is an opacity or opacification of the lens of the eye. At the outset I would warn you of the inadvisability of ever using the term before a patient; quite mistakenly, though none the less sincerely, the condition is regarded by most lay folk as synonymous with irremediable blindness, and the use of the term usually strikes terror into them. It must also be remembered that, owing to the greater reflecting capacity of the capsule of the lens in advancing years, a lens when viewed through a small pupil by focal illumination may appear cataractous when in point of fact it is not, there are many alternative terms which may be used in referring to the condition when it is actually present, perhaps the best of which is " lens opacities," which usually means nothing to the patient.

The normal lens is a bi-convex, transparent structure suspended in its capsule by means of the suspensory ligament immediately behind the iris in a plane at about the junction of the anterior third and posterior two-thirds of the globe. Epithelial in origin, it is peculiar in sharing with the enamel organ of the teeth a property different from that of all the other epithelial structures of the body—there is no desquamation or loss of the older cells, but the new cells are laid down outside the old. Since the lens grows continuously, this fact offers grounds for interesting speculation as to the cause of presbyopia and senile cataract.

Senile cataract must be regarded as a degenerative phenomenon, though it is very difficult to disregard the possible effect of radiation upon the lens, and to assess its importance as a causative factor. On the grounds that a majority of senile opacities start in the lower part of the lens, the importance of radiation from above in their causation has been stressed, but the point is by no means proved. Complicated cataract may be brought into line with the degenerative hypothesis by assuming a failure of local nutrition of the lens. In parentheses, a point of terminology must be mentioned. The term " senile " is applied to a cataract of no obvious cause which may, however, be definitely pre-senile in time; the term " complicated " is applied to an opacification of the lens substance which arises as a result of local disturbance or systemic disease. The proliferation of such lens cells as may remain caught between layers of capsule after removal of the bulk of the lens is referred to as " secondary " or " after " cataract.

The histological changes visible in a cataractous lens vary according to the type of cataract; as a

generalisation, however, it may be said that the normal regular arrangement of lens fibres separated by cement substance is disturbed to the extent of fragmentation of the fibres, degeneration of these fibres into albuminous fluid, and fluid separation and vacuole formation between the fibres.

Let us first consider senile cataract, the commonest form. The most usual appearance of an early senile cataract consists of radial striæ of opacity in the peripheral cortex; these gradually increase and coalesce until the whole lens appears to be opaque, when the cataract is referred to as mature or ripe. It is important to realise that there is no necessary relationship between maturity and operability; any cataract which sufficiently hinders vision is operable, and the decision as to when to operate is made by assessing the advantages to be gained thereby. In general, a uniocular cataract should not be operated upon unless the patient expressly desires it after having had explained to him that, if the other eye has good vision, no correction can be prescribed to give the operated eye good vision, because of the discrepancy in the size of the retinal images in the two eyes, which would give rise to diplopia. The patient may, however, desire the operation to be performed (knowing that no correction will be prescribed) because of the increase in the visual field which will certainly result, and which might in a particular case be of advantage.

Another form of senile cataract is the nuclear, in which the sclerosis and opacification is more advanced in the nucleus of the lens, as opposed to the cortex. In rare cases the cortex liquefies and the hard opaque nucleus is found free in the fluid contained in the lens capsule—a condition called Morgagnian cataract. Black cataract is the term usually applied to the dark-brown discolouration which may occur concomitantly with opacification.

The commonest form of congenital cataract is the zonular or lamellar. In this form the nucleus (the term may be conveniently used, though actually a distinction between nucleus and cortex can rarely be made before the age of 25 or so) is clear or practically so, and the cortex is also clear. A zone of opacity is present in the lens, the cause of which opacity is a period of malnutrition in fœtal life; experimental work has shown the importance in this connection of Vitamin A, phosphates, and fat metabolism. Another fairly common form of congenital opacity is the anterior polar, which may be capsular or cortical. The capsular form is due to epithelial proliferation initiated by contact between lens and cornea at an early age. The same condition may arise from the same cause after birth as a result of trauma, or the perforation of a corneal ulcer followed by delayed healing. The cortical variety may ensue from a similar cause; new lens fibres may be laid down after the accident over the cortical opacity, resulting sometimes in a zone of clear lens between the two opacities which were due to the same cause—which, indeed, started as one opacity. If the anterior chamber is re-formed but the lens still adheres to the cornea at one point, the tissue may be stretched so that the opacity projects in front of the plane of the anterior capsule, giving rise to a pyramidal cataract; in rare cases a fine band of fibrous tissue may stretch from lens to cornea across an anterior chamber of normal depth.

Other forms of capsular cataract occur, most of which are sufficiently described by their names. These include Blue Dot cataract, nuclear, fusiform, and discoid. Other congenital abnormalities, ocular and otherwise, may accompany such conditions. A form of congenital anomaly which must be mentioned is a persistent posterior vascular sheath of the lens, which, though not a cataract, is lenticular, and seriously affects vision. Here the normal embryonic vascular sheath persists, and the remains of the hyaloid artery—in some cases still patent—crosses the vitreous to form the sheath.

In considering the treatment of congenital cataract it must always be borne in mind that removal of a cataract means removal of the lens, with consequent loss of accommodative power; one must decide that the amount of visual acuity that the patient has, with the faculty of accommodation, is not of more practical value to the young patient than first-class vision with no such faculty, necessitating the use of two pairs of glasses. Sometimes an iridectomy to expose a portion of the clear periphery of the lens for optical purposes serves a more useful purpose than removal of the lens itself; this may be determined by seeing if an appreciable increase in visual acuity is brought about by full mydriasis. The operation on a young lens consists in opening the capsule with a needle and allowing free access of aqueous, which results in absorption of the lens; the lens matter swells up and may fill the anterior chamber, necessitating careful watching of the eye in case a rise of tension should ensue, when the lens matter must be evacuated with a curette.

Complicated cataract is a progressive form of opacity arising from local nutritional disturbance; it often starts as a posterior cortical opacity and is usually diagnosable, clinically, as to type. Prolonged intraocular inflammation of any kind may result in such cataract formation. Other conditions

in which it is not uncommonly seen are high myopia, glaucoma, detachment of the retina, and retinitis pigmentosa. Treatment of the condition is first naturally directed towards the cause, the cure of which may result in arrest of the opacity. If, however, vision is bad enough, removal must be attempted, though from the nature of the disorder it may be realised that such a proceeding is often accompanied by complications, and special precautions are necessary.

The commonest systemic condition associated with cataract is diabetes; cataract is also an occasional concomitant of general nervous disease, one which occurs to me at the moment being dyotrophia myotonica.

Traumatic cataract may arise as a result of either penetrating or non-penetrating injury. Contusion presumably causes a disturbance of the anatomical relationship between lens substance and capsule, resulting in disturbed nutrition and opacification. It is also possible that a non-demonstrable lesion of the posterior capsule may occur, giving access to the aqueous humour, with consequent swelling and opacification, as has been described. A gross breach of the capsule through a perforating injury causes the same sequence of events as such a breach made at operation upon a young cataract, though absorption will not go on to completeness if the lens is old. In the young, complete absorption may follow, the pupil becoming once again black in appearance. If this does not occur, and it is desired to remove the cataract, either discission or extraction, according to the age of the patient, is performed in the usual manner.

Occupational cataract arises from the exposure of the lens to rays of unusual wave-length. The long infra-red rays may cause cataract in such men as glassworkers and ironworkers; it is probable that the effect is not a direct one, but is a heat effect through the iris, or possibly through a disturbance of nutrition from damage to the ciliary bodies. It is asserted that the short ultra-violet rays can cause cataract, though such an occurrence is extremely rare.

The commonest complaint of a patient who is the subject of cataract is diminished visual acuity; sometimes the opacities in senile cataract are appreciated as such, the complaint being of black spots which do not move independently of the eye—an important point in distinguishing these from " spots " due to other causes. The irregular refraction of the lens substance consequent upon these opacities often causes scattering of light, with disturbing and often painful results. Vision may be better in diminished illumination, from which fact it may be deduced that the opacity is mainly nuclear, the widening of the pupil which occurs in the less bright illumination allowing the use of the clearer lens periphery. If the opacities are mainly peripheral, on the other hand, the reverse effect may hold, and a small pupil may be a comfort to the patient by cutting off the periphery of the lens and preventing scatter. It will be seen that much may be done for the patient's comfort by careful advice as to routine, in the incipient stage.

If operation is decided upon, one must be careful to determine, as far as is possible, that the eye is normal apart from the lens changes, and that a good visual result may be anticipated from a removal of the opaque lens. A bacteriological examination of the conjunctival sac is made to ensure that it holds no organisms which, if introduced into the eye, would cause dangerous inflammation; the lachrymal sac is also examined for a similar reason. The general condition of the patient is also considered, and potential sources of danger to a successful intraocular manœuvre, such as teeth, nose and throat, are examined and treated if need be.

Operation usually means a stay of from ten to fourteen days in a nursing home or hospital; the nursing of these cases demands a very high degree of skill. Sometimes the main operation of extraction, if this is done without removing the capsule as well (the more usual method), has to be followed by the trivial one of needling or capsulotomy, if the remaining capsule is opaque or wrinkled. After operation, in all but the rarest cases of high myopia, glasses are essential for the obtaining of that degree of visual acuity which it is the aim of the operation to give, and which, indeed, if conditions are favourable, usually follows upon this operation, at once one of the most delicate and one of the most satisfactory in surgery.

Finally, a word should be said with reference to the medical treatment of senile cataract. As far as one knows, the opacification of the lens substance is the result of an irreversible chemical reaction, and it is difficult to see how any means, medical or physical, could effect a clearing of the opacity. There are, none the less, many preparations on the market which purport to " cure " cataract, both drops for instillation and drugs to be taken by mouth. It is a fact that many senile cataracts remain stationary for very long periods of time, and one is driven to the conclusion that it is these cases that are quoted as having benefited from medical treatment.

Correspondence

The Presystolic Murmur

To the Editor of the GAZETTE

SIR,—Recent letters in your columns dealing with the interpretation of certain physical signs have encouraged me to crave space for some comments on the nature of the " presystolic " murmur. These comments are based on observations by one of the prominent Guy's clinicians of the last century, and it is a sad but rather piquant reflection that nothing has happened since the year of the Franco-Prussian War to diminish the confusion that has existed as a result of use of this term. That it is still the subject of more heated discussion and misunderstanding than any other single physical sign is my justification for this letter.

In the *Guy's Hospital Reports*, 1870-71, xvi, 247, is an article entitled, " On the murmurs attendant upon Mitral Contraction," by Hilton Fagge. This paper was published nine years after Gairdner, of Edinburgh, first described the " auricular-systolic" or " presystolic " murmur as evidence of mitral stenosis.

Fagge observes that the presystolic murmur should have the following characteristics :—

1. It should be presystolic in time. In his words, " the first sound of the heart is no longer the first audible sign of the heart's waking up from its quiescence during the pause ; it is preceded by the morbid bruit or sound."

2. It has a special seat, being loudest at the apex, and generally confined to this region.

3. It has a peculiar quality, being a " rough churning or grinding bruit." In some cases, however, its duration is extremely brief.

He then qualifies the first point of his definition. In the course of his observations on cases in the wards, many of whom he had followed to post-mortem, thereby confirming the presence of mitral stenosis, he had noticed that a short interval might exist between the bruit and the first sound. Moreover, not infrequently the bruit occupies not only that portion of the interval between the second and first sounds immediately preceding the latter, but nearly the whole pause, sometimes even being continuous with both sounds. In other words a bruit cannot strictly be called presystolic —" it ought rather to be called diastolic, *quoad* its rhythm." It seems that Dr. Gairdner himself referred to the characteristic murmur of mitral stenosis as ventricular diastolic or auricular systolic and avoided the term presystolic.

Fagge goes on to state : " But I wish here particularly to insist on the fact that I have found great bewilderment to arise in the minds of students from the careless application of the name ' presystolic ' to such murmurs, occupying nearly the whole pause. There can be no doubt, I think, that this name will ultimately supplant all others as a designation for the murmur caused by contraction of the mitral orifice. But when it is used for all such murmurs without exception one ought clearly to understand and to explain that its strict meaning is departed from, and that the question of rhythm is then really overlooked and supplanted by other and secondary considerations."

Unfortunately, Fagge's prophecy as to the persistence of the term presystolic has proved correct, at least as far as Guy's teaching is concerned, and the inconsistency whereby a murmur is often called presystolic rather because of its localisation to the apex and its peculiar churning or grinding quality than because of its position with reference to the heart sounds, has remained a source of bewilderment up to the present day. In recent years Sir Thomas Lewis has again drawn attention to this illogicality, basing his arguments on the fact that with a rapidly beating heart it is impossible to time a murmur with sufficient accuracy to be able to state in which part of the diastolic pause it occurs, and further that graphic registration of the heart sounds has shown that a murmur confined to presystole is rare.

It seems that this murmur was a source of dissension among Continental as well as British stethoscopists. The French physicians in particular were much exercised by it. Fauvel had recognised the presystolic bruit as evidence of mitral stenosis, and suggested that it was caused by auricular systole forcing blood through a narrowed mitral orifice. Hérard described cases of mitral stenosis characterised during life by systolic, presystolic and diastolic murmurs, and in some cases by no murmurs at all. In 1862 Durosiez had referred to " ce fameux bruit présystolique dont tout le monde a parlé, sur lequel personne ne s'entend, que Hope lui-meme avoue n'avoir jamais entendu, que M. Bouillaud enfin neglige et même nie." Hope and Bouillaud were cardiologists of the period.

In Germany, Wintrich stated that the presystolic murmur could rarely be recognised, but records six cases of mitral stenosis proved by post-mortem, in whom a diastolic murmur was heard during life. In England, Dr. Austin Flint observed that the presystolic murmur was probably less rare than had been supposed. Dr. Hyde Salter, whose classic work on asthma is a masterpiece of accurate observation, goes so far as to

state that "it is the easiest to recognise of any murmur whatever," and that any student who failed to recognise it "could hardly be considered a decently informed member of our profession."

This confusion can be traced to two sources of error. Fagge was convinced that many authors had omitted accurately to compare the murmurs with the carotid pulse, with the result that they had mistaken the first sound for the second, so that what was really a diastolic murmur was thought by them to be systolic. He produced considerable circumstantial evidence to prove this point. In the second place those who used the term "presystolic" solely with reference to the timing of the murmur, naturally found it to occur less commonly than those who used it in the wider and less accurate sense.

I have quoted Dr. Fagge's paper at some length to show that there is genuine reason for difficulty in recognising and understanding "ce bruit fameux," and that nothing has happened since that time to diminish this difficulty. It is unfortunate that a more accurately descriptive term, such as a "rumbling," or "grinding diastolic" murmur, which could in individual cases be further qualified as "early," "mid," or "late," is not generally employed to the exclusion of "presystolic" altogether. But perhaps Dr. Fagge was wiser in recognising that it was easier to alter the meaning of a word than to persuade the medical profession to give up a term with which they were familiar.

Yours, etc.,

R. S. BRUCE-PEARSON.

Guy's Hospital, S.E.1.

Reviews

Minor Maladies and their Treatment. By LEONARD WILLIAMS, M.D. Published by Messrs. Baillière, Tindall & Cox.

THIS is the seventh edition of Dr. Leonard Williams' book, the first edition having appeared thirty-one years ago. Translations have been made into French and Spanish. The large sale of this book over a long period testifies to the existence of a widespread demand for a treatise on minor maladies—a demand which Dr. Williams has succeeded in meeting. The success of this book is as much attributable, however, to the vigorous and entertaining style in which it is written, for Dr. Williams is at all times downright and provocative, and what he says demands attention even where one may not agree with him.

Apart from the mental stimulation received from reading this book, its main value lies in the fact that, at all times, it is the practical treatment which is to the forefront. We are given a generous number of prescriptions which have stood the test of time; we are instructed in a large number of practical details of treatment which would not be obtainable in any standard textbook of medicine. The first 54 pages deal with colds, coughs and sore throats, and there is in this section a dissertation upon early tuberculosis and its diagnosis. In the chapters on indigestion, constipation and diarrhœa the teaching is very similar to that of the Guy's physicians, but there are several points made which are of interest. Stress is laid, for instance, upon uncorrected errors of refraction as a common cause of indigestion; belladonna is cited as aphrodisiac in its action.

With regard to the subject of constipation, the author is an avowed disciple of Arbuthnot Lane, and personally, we can see no reason, once the theory of intestinal stasis and the subsequent absorption of toxins is accepted, why every human ailment should not be ascribed to it. The whole theory with its wide implications seems to us to be based on the flimsiest of evidence. With regard to the question of what constitutes a good evacuation, the author lets us in on a good thing. Medical Officer: "What do you mean by a good rear?" Sergeant, promptly: "Twice around the pan and pointed at both ends."

Rheumatism is one of the commonest complaints met with in this country, of which someone once wrote, "Most countries possess a climate—England has weather," and Dr. Williams has much to say about the various myalgias, neuralgias and fibrositises which he groups together under the convenient and descriptive term of "the rheumatics." The failure of the medical profession to provide effective treatment for this set of conditions constitutes one of those perennial grudges one so often encounters.

A chapter is included on "Minor glandular insufficiences." The author seems to have found in thyroid extract a panacea. Among those conditions which may be treated with it are eneuresis, adenoids, psoriasis, lupus and ichthyosis, the dosage he recommends being from one-tenth to one grain three times daily, as opposed to the much larger amounts usually prescribed.

There are two chapters which might well have been excluded from the book, since in neither is it possible to do justice to the subject. These are

on minor dietetics and insanity. Dietetics is always dietetics, and we cannot recognise minor or major varieties of this extremely boring but important subject. As for insanity, while to the patient it does not constitute a malady at all, to the friends and relatives it must remain among the major catastrophes.

Principles of Medical Statistics. By A. BRADFORD HILL, D.Sc., P.hD. Published by *The Lancet*, Ltd. *Price*, 6*s*.

AND statistics is statistics—in fact, not everyone's kettle of fish, as can be seen by a perusal of almost any issue of a medical journal. In this week's *British Medical Journal* the mortality for various series of partial gastrectomies reported by nine different operators varies from 1.5 to 18.6 per cent.—a variation which one would be loth to ascribe to differences of operative skill. Obviously somebody's statistical sense is at fault, and one knows at which end of the scale to look, for wish-fulfilment is always with us. Well, one can rightly conclude that with statistics scepticism should be all-pervading. As for Dr. Bradford Hill's volume, we fear it will avail but little. Those whose veracity is never found in their figures will never read it, while the more scrupulous among us will already have learned its lessons. However, for him who contemplates publication of a first series of results in statistical form, a perusal of this excellent manual will provide a good safeguard against the more obvious errors into which he might fall.

Sport

Cricket

SECOND ROUND, CUP-TIE

GUY'S v. MIDDLESEX HOSPITAL

ON Monday, June 14th, Guy's beat Middlesex by 17 runs in the second round of the Cup, in a close and exciting game at Honor Oak Park.

Middlesex Hospital won the toss, and put us in on a wicket slightly affected by rain. This seemed a doubtful policy, but turned out to be a stroke of genius, for we fared very badly against the bowling of R. L. Skea.

After Morey and Leeming had put on 40 runs for the first wicket we "processed" rather too regularly to and from the wicket, and at lunch had lost six wickets for a meagre 67. However, the tail showed an aggression which was lacking in the earlier batsmen and, thanks to some good batting by Thomas, Coffey and McClintock, we eventually totalled 127. Middlesex had all day to get them, and our chances of victory were rather remote.

By tea-time Middlesex were in difficulties and the game was very open, three wickets being down for 30.

On resuming, the game swung steadily in their favour, 34 runs being added before Rushby bowled Riddell rather luckily. The fifth wicket fell at 82, and the sixth at 83, and a faint glimmer of hope was reawakened. Skea was well caught by O'Gorman at 91, and Bowen, who had batted well for 33, was out at 97.

Thomas swept Morey twice to the leg boundary and the atmosphere became extremely tense. The spectators grew mildly hysterical, the captain was obviously worried, and O'Gorman sang audibly at short leg. The end came suddenly when McLintock came on at the stand end and dismissed the last two batsmen in consecutive balls, leaving us winners by 17 runs.

To Morey must go much of the credit for this victory. He changed the bowling with unsurpassed cunning, took four wickets himself, and also fielded extremely well.

Scores.—Middlesex, 110 (W. A. Bowen, 33; L. G. Morey, 4 for 44; C. L. T. McClintock, 3 for 20).

Guy's

J. A. Leeming, c. and b. Skea	25
L. G. Morey, b. Skea	23
H. D. Foster, l.b.w., b. Skea	0
O. G. Lane, c. Derel, b. Skea	4
P. H. Birks, b. Skea	11
G. O'Gorman, c. Derel, b. Muir	3
A. C. C. Hughes, c. Miller, b. Gethen	2
C. L. T. McClintock, b. Gethen	15
H. A. Thomas, not out	20
S. E. Coffey, b. Muir	14
F. W. Rushby, c. Bowen, b. Muir	1
Extras	9
Total	127

GUY'S v. PINNER

AFTER one of the best games of the season Guy's lost to Pinner by 11 runs. Batting first, our opponents started steadily, but shortly before lunch Rushby bowled two great overs and with the score at 78 for 5 we ate a very good lunch, perhaps rather too complacently.

On resuming, the atmosphere was definitely "post-prandial," and with Roncoroni dealing

severely with our slow bowlers 60 runs came in 25 minutes. The Pinner tail steered the ball to the least expected places, and they eventually totalled 193.

Guy's opened badly, losing two wickers for 7, but with G. H. G. Chase giving a delightful performance on his first appearance and Thomas also showing good form, the score reached 70 in good time. We then lost three wickets quickly, but O'Gorman, with some passive assistance from Birks, put on 60 runs, but three wickets fell at 130, and the situation was grave.

A. V. Hurst and S. Coffey now made a very brave bid for victory, the latter in particular hitting with great power. Good and bad balls were dispatched alike in unusual directions, and his gallant innings only came to an end when we were 11 runs short of victory.

Scores.—Pinner, 192 (J. A. Roncoroni, 41). Guy's, 182 (G. H. G. Chase, 41 ; S. A. Coffey, 35).

GUY'S v. CROFTON PARK

Crofton Park beat Guy's by 6 wickets.

Scores.—Guy's, 102 (H. D. Foster, 22 ; P. H. Birks, 29). Crofton Park, 102 for 4.

JUNIOR CUP

The Second XI having easily defeated London and Middlesex, have received a walk-over against St. Thomas's, and thus enter the Final of the Junior Cup.

SEMI-FINAL CUP MATCH

GUY'S v. ST. THOMAS'S

THAT we were lucky to save this game we must be the first to admit, but St. Thomas's threw away much of their advantage by making a very indifferent declaration.

Coffey took the first wicket with his third ball, but then Porter, who batted very well, and Walker put on 180 for the second wicket. The latter was a little lucky in his opening overs, but later played very steadily while Porter went on to complete a chanceless hundred.

St. Thomas's scored steadily, but never really fast against some good length though far from brilliant bowling. Coffey had one devastating spell with the new ball when he took three wickets in three overs and McClintock was untiring.

St. Thomas's eventually declared at 4.25 with the score at 319 for 9.

To get those runs in under three hours was a tallish order. Our only chance lay in our opening pair making a big stand, but they failed, and all we had to play for was a draw. Thomas lasted well for 37 and Birks and Clare had a long and valiant stand.

By 7 o'clock we had scored 130 for 5 and the game looked dead, but St. Thomas's brought on Cookson, a fast left-hander, who bowled to three shortlegs. Birks, Chase, O'Gorman, Coffey and McLintock all fell in 20 minutes, and by 7.12 only Rushby and Hurst were left—the former, be it said, has never been known to reach double figures. However, Hurst batted beautifully, and Rushby, to whom all honour, survived a series of hair-raising appeals, and Guy's lived to fight another day.

Scores.—St. Thomas's, 319 for 9 declared (H. J. Porter, 104 ; A. M. Walker, 87).

Guy's

J. A. L. Leeming, l.b.w., b. Cookson	8
L. G. Morey, b. Kinlock	19
H. A. Thomas, c. Barnett, b. Smith	37
G. H. G. Clare, c. Smith, b. Cookson	16
P. H. Birks, c. Kinlock, b. Cookson	35
G. O'Gorman, b. Cookson	1
A. C. C. Hughes, c. Higson, b. Kinlock	2
A. V. Hurst, not out	15
C. L. T. McClintock, c. Kinlock, b. Cookson	1
S. A. Coffey, c. Walker, b. Cookson	0
F. W. Rushby, not out	9
Extras	12
Total for 9 wickets	155

Nursing News

A GARDEN PARTY is to be held in the Hospital on Friday afternoon, July 23rd, by kind invitation of the President and Governors of the Hospital. Invitations are being extended to members attending the International Congress of Nurses in London. All members of the Nurses' League will be welcome, and there will be a League re-union room in the Nurses' Home presided over by Miss F. A. Sheldon and Miss F. Broome, where members can sign their names and write notes or leave messages for their friends. The wards and departments, the Gordon Museum, and the Nurses' Home will be open to visitors.

Hospital Information, etc.

Notices

Applications are invited for the post of Chief Clinical Assistant and Registrar in the Department for Psychological Medicine, for a period of one year in the first instance as from October 1st, 1937. The Clinical Assistant appointed will be required to devote a large part of his time to psychiatric work with children. Salary, £350 per annum.

Applications should be lodged with the Superintendent, Guy's Hospital, on or before September 4th, 1937.

Within a few minutes' walk of the Hospital the Trinity Residential Club for Professional Men and Students has recently been opened. Comfortably furnished throughout with Sun Lounge, Reading Room, Garden Restaurant and Garage. The terms are extremely moderate, the annual subscriptions being: Resident, 3*s*. per quarter; Non-Residents, 10*s*. 6*d*. per annum. Comfortably furnished room, with hot and cold water, including breakfast, bath and attendance, 27*s*. 6*d*. per week. Further particulars may be obtained from the Secretary, The Trinity Club, 29, Trinity Square, S.E.1.

Pass List

CONJOINT BOARD.

June, 1937.

Chemistry.

J. A. Boyd
C. H. J. W. Cowles
J. H. Forrester
D. Gill
E. Harvey
M. G. Marks
W. L. Oakes
F. J. Piercy
T. W. H. Woodward

Physics.

K. A. Barnett
K. F. Barnes
J. H. Forrester
A. P. Gimson
P. H. Holford
R. G. Lomax
M. G. Marks
W. L. Oakes
J. P. Pearce
W. L. Renouf
W. A. M. Young

Elementary Biology.

J. Cranfield
M. G. Marks
C. P. Murch
J. A. W. Purnell
W. L. Renouf
J. F. S. Rumble
H. R. Unstead
I. R. Waters
W. A. M. Young

FIRST EXAMINATION.

Anatomy.

J. C. Bulstrode
J. B. Gayes
J. H. G. Halliday
J. W. Lee
G. C. Price
F. S. W. Shute
W. F. J. Weston

Physiology.

J. C. Bulstrode
C. H. Dunn
J. B. Gayes
C. R. Morgan
G. C. Price
R. K. Roberts
F. S. W. Shute
H. R. Swingler
W. F. J. Weston

Pharmacology.

R. M. de Gregory
J. Lynch
C. R. Morgan
A. J. Patenall

UNIVERSITY OF CAMBRIDGE.

Easter Term, 1937.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.

PART II.

Principle and Practice of Physic, Pathology and Pharmacology.

R. A. Andrews
R. C. S. Dick
R. Edwards
E. B. French
R. C. Neville
J. P. Singer
G. E. Yardley

PART I.

Surgery, Midwifery and Gynæcology.

E. W. O. Adkins
A. W. Box
R. C. S. Dick

QUALIFYING EXAMINATION IN ANATOMY for MEDICAL AND SURGICAL DEGREES.

Easter Term, 1937.

D. W. Burnford
C. H. G. Chase

QUALIFYING EXAMINATION IN PHYSIOLOGY FOR MEDICAL AND SURGICAL DEGREES.

Easter Term, 1937.

G. P. A Sechiari.

PART I.

Inorganic Chemistry: F. S. Mellows.

PART II.

Physics: S. M. Vine.

PART III.

Elementary Biology: J. S. Pegum.

SOCIETY OF APOTHECARIES OF LONDON.

PRE-MEDICAL AND PRIMARY EXAMINATIONS.

July, 1937.

Anatomy: C. A. Anderson.

FINAL EXAMINATION.

June, 1937.

Surgery: W. D. Brinton.

Medicine: *J. R. Audy.

Forensic Medicine: *J. R. Audy.

* Has now completed the Examination.

Papers by Guy's Men

A. Ralph Thompson. Vesical extroversion with control of micturition. *Brit. Med. Jour.*, 1937, ii, 3.

G. B. Pritchard. Ankylosis of teeth in man. *Brit. Dent. Jour.*, 1937, lxiii, 13.

Geoffrey Marshall. Respiratory diseases in old age. *Practitioner*, 1937, cxxxix, 21.

Changes of Address

T. M. Calhaem, Kelly and Walsh Buildings, Raffles Place, Singapore, Straits Settlement.

Marriage

IRVING—O'CONNOR.—On June 23rd, 1937, at St. Mary Abbot's Church, James Tutin Irving, of the Rowett Institute, Aberdeen, to Janet May O'Connor, of New York City.

EDS. { A.G.W.H. / H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

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PASSIM

THAT "dog bites man" is not news, whereas "man bites dog" is, everyone knows to be a hoary journalistic dictum.

Another more modern editorial saying might be that "doctors are always news, and doctors on the subject of doctors make the front page every time." On another page we give a review of Dr. Cronin's book, and we do not intend to enter our reviewer's province by discussing the proprieties of a man criticising his own profession. However, the coincidence of the annual meeting of the British Medical Association with the publication of Dr. Cronin's book gave us reason to speculate on a most entertaining and, indeed, important subject, namely, the type of publicity which is accorded the medical profession. This may be divided roughly into three groups. Firstly, there are those charming items of news about doctors who poison their housekeepers, doctors who steal their patients' wives, doctors who embezzle the funds of their local society, or, indeed, commit any of the offences to which most of humanity is at times addicted. These, fortunately, can be offset by those stories of the doctor who flies to the sick child's bedside with the serum, and many others of a similar ilk. Secondly, we have the annual epitome of what medicine has achieved in the current year as exemplified in the maudlin pronouncements reported as emanating from the British Medical Association Annual Meeting. These form uniformly depressing reading, concerned, as they appear to be, with the latest cures for the common cold and such trivialities. Thirdly, there are books by doctors about themselves and their work, and these, of course, are as varied in character as are the authors themselves. Some are trite, some scholarly; many are outrageously sentimental and romantic; a minority are bitter and cynical.

From this hodge-podge of information the public, which is becoming more health-conscious every day, has to form an idea of Medicine and what it stands for, and it is not to be wondered at if that idea is a very erroneous one.

Is this fallacious attitude of the public worth correcting? and, if so, have we the possibility of correcting it? It is not to the advantage of the practitioner that the public should have an exaggerated idea of the possibilities of Medicine, nor that the profession should be surrounded by that aura of romanticism and mystery portrayed by the films and the popular press.

It is difficult to see how it would be possible to counteract these baneful influences, but we suggest that the British Medical Association would do well to study this question. Publicity in these days is not a subject on which it is possible to adopt a negative attitude. We must see to it that we achieve a good press, even if it necessitates putting the matter in the hands of a publicity agent.

WE most heartily congratulate Dr. C. H. Rogerson, M.D., M.R.C.P., on his appointment to the post of Superintendent to the Cassel Hospital for Functional Diseases. Our congratulations are expecially warm not only on account of the great distinction of the post, but also because of the comparative lightness of the new Superintendent's years.

Dr. Rogerson came to us from Haileybury in 1926, and after a distinguished career as a student, in which he won the Treasurer's Medal in Clinical Medicine and obtained a certificate in the corresponding examination in Surgery, he became a Clinical Assistant in 1931. At this point he took the somewhat unusual course of applying

for the post of House Physician to the Neurological and Psychiatric Departments, instead of making, as is the custom, for appointments in more general fields. He secured his post, and then became the first Sir Alfred Fripp Memorial Fellow in Child Psychology. During the course of this appointment he acquired a reputation for his work on the asthma-eczema-prurigo syndrome in its relation to children, and wrote papers on this subject which appeared in the *Guy's Hospital Reports* and in the *Lancet*. Following this, he spent some time studying in America, and then returned to us as Registrar to the Department of Psychological Medicine, in which position he has since remained.

Dr. Rogerson's departure is a great loss to the Hospital, whose pleasure at his appointment is inevitably lessened by regret at his going. His conscientious work and spontaneous gaiety were invaluable assets both to his own psychiatry and to the department in which he worked; though one could hardly say of one so much above the average that he was a normal person, yet his absence of eccentricity and remarkable good sense came as a surprise to those many people who, strangely enough, seem to expect of the psychiatrist certain peculiarities of demeanour not commonly to be found elsewhere. It is not without regret that we make our farewell, but with alacrity that we wish Dr. Rogerson all success in his happy and distinguished appointment to the Cassel Hospital.

THE traffic problem is ever with us. It is true that Mr. Hore-Belisha has gone, to be replaced by the more sedate Dr. Burgin, but his beacons remain, reminding us that our ever watchful Government is at all times solicitous of our welfare, as we move, cat-like, from one appointed place to another. Whether these orange globes have achieved their purpose we do not know, but that they replaced for a time the policeman's helmet of our fathers' days in the eyes of the medical student there is no doubt, for they make, some say, very pretty lamp-shades.

If the Government, with its ample resources, has failed to solve the problem of moving the population easily and safely from one point to another, we may perhaps be excused here at Guy's with our antiquated building and machinery for a similar failure on a small scale, but we cannot help wishing that we had in our midst a master-mind who would make some effort, however slight, to tackle our local problem.

These thoughts came to us last week, as we listened to a description of a particularly striking traffic "tie-up" which had occurred in the Surgical Block. It was a Thursday morning, and the operating list was a long one. "The next case up, please," had been called, and the dressers went out in search of a trolley. Twenty-five minutes later they returned with the patient, who was lying the while some twenty yards from the theatre. Apparently trolleys that morning were in demand, for one was not to be found anywhere in the Surgical Block. Every floor was searched, even the X-Ray Department was scoured, and eventually the quest ended on the third floor of Hunt's House with the discovery of a red streamlined vehicle belonging to the Front Surgery. Troubles were not, however, at an end, and vertical transport proved more difficult even than horizontal. Only one lift in the Medical Block was working, the other was full of wardmaids laden with what appeared to be bowls of dripping. When the descent had been accomplished and the nether regions negotiated, it but remained to rise two stories from the basement to the first floor.

After much button-pushing and banging our dresser decided to investigate what was holding matters up. He discovered one lift on the third floor full of large bundles, the door wide open, and no one in sight. The other lift was found to be full of brass-topped drums in the process of transport. Thus twenty-five minutes was taken for what should have been a five-minute job.

We should not occupy our readers' time on what may appear a triviality if this was an isolated instance. Unfortunately, it is nearly a daily occurrence, which should be avoidable with a little organisation. Difficulties there are, we know, but we suggest that the following measures might well alleviate the present state of affairs. Firstly, that students should not use the lifts during the rush hours. Secondly, that transport of linen and dressings should be undertaken before ten o'clock in the morning; and thirdly, that a porter should be delegated to reassemble trolleys where they belong twice a day.

We make these tentative suggestions with diffidence. Perhaps other measures would be better. In any case, something should be done.

▭

THE Garden Party has returned to Guy's. It was no uncommon thing in former days for the lawns of the Park (especially unenclosed for the occasion) to be decked with the great, strolling decoratively in academic dress. Of late the custom seems to have lapsed. But on Friday, July 23rd, the *haut monde* of Harley Street (*pace* Dr. Cronin) and his wife were seen treading delicately the sward, for here in our very midst was the Garden Party to entertain delegates to the

International Congress of Nurses. Our natural modesty prevented us from attending in the capacity of reporter, but a casual glance as we inevitably passed through the Park showed us that though there was, in these democratic days, no academic dress, this falling from grace was compensated for by the provision of a settee on a red carpet whereon Lord Nuffield and the Matron conversed together beneath the immemorial elms. We do not suppose that conditions have changed much, and therefore can, in view of our enforced absence, do no better than refer our readers to Dr. Blacker's commentary on a similar function of ten years or so ago.

The Evolution of the Mastoid Operation

A Clinical Lecture by W. M. Mollison, Esq., M.Ch.

GENTLEMEN,—I preface this lecture with sentences from the late Sir Charles Ballance's preface to his monumental book on " Surgery of the Temporal Bone " :—

" A knowledge, accurate and complete, of human anatomy is the foundation of all real surgical education. The certainty of the anatomist and the dexterity of the artist are alike essential to success in operations on the temporal bone."

" History is as essential to the philosophy of any branch of medicine as is actual clinical experience to its successful practice."

The operation to open the mastoid process in order to evacuate pus and so to prevent spread of disease in directions which lead to dangerous intracranial complications is to-day a commonplace, but the operation of to-day has been evolved only since 1868 or 1870. Before this, operations were performed on the mastoid process, but not only to release pus, and the successes were few.

Perhaps it is remarkable that this should have been the case when the anatomy of the ear, even the internal ear, was admirably demonstrated and known many years earlier, even in the 16th and 17th centuries ; but it must be remembered that lack of anæsthetics was one deterrent, though not a serious one since many major operations were successfully carried through in pre-anæsthetic days, as you all know. Looking back to those days all must be struck with admiration at the fortitude of the patients and the skill of the surgeons, who had to sacrifice all to speed. Consider Astley Cooper's ligature of the abdominal aorta or Cock's perineal lithotomy performed in a matter of seconds, in the light of the present day's deliberate and exact operations.

The other deterrent was lack of antisepsis or asepsis. I need not stress the importance of this to the present-day student, to whom asepsis is second nature. Even so, I venture to urge those of you who have not already done so to read the " Life of Pasteur," one of the most fascinating and thrilling books ; without Pasteur's work Lister could not have evolved his methods of antisepsis.

In a letter dated February 13th, 1874, to Pasteur, Lister wrote :—

" Allow me to take this opportunity to tender you my most cordial thanks for having, by your brilliant researches, demonstrated to me the truth of the germ theory of putrefaction, and thus furnished me with the principle upon which alone the antiseptic system can be carried out. Should you at any time visit Edinburgh, it would, I believe, give you sincere gratification to see at our hospital how largely mankind is being benefited by your labours."

To return to the mastoid operation. The first reference to the operation is in 1649, when Johannes Riolanus wrote : " *Joining the tympanum towards its upper part there is seen a small and very narrow opening, which, gradually enlarging, passes into a cavity of considerable size, presenting everywhere little depressions, like the cells of a honeycomb filled with air . . . it happens that when this air, which should always be still, is stirred up in the ear by the impact of a fresh-air current, that the ears buzz continually. But how can we give exit to this air which is such a source of trouble ? There is certainly no other way of doing this except trephining the mastoid process.*" And again : " *Therefore when this canaliculus (Eustachian tube) has become useless, why should not the cellular end which communicates with the ear be made to serve the same purpose by perforating it with a sharp instrument ?* " Thus we see that the earliest operations on the mastoid were suggested to relieve tinnitus or to make a new Eustachian tube ; only later was the operation done to give an outlet for pus.

Though 1649 is given as the date of the earliest operation, it may have been done sooner, and I am fortunate in being able to show you a rare drawing by Van Leydon called " The Surgeon." I am indebted to my friend Dr. Shackle for this. It is dated 1524, and represents a surgeon making an incision behind the ear of a patient seated on the floor in front of him.

A second picture, also possibly of a mastoid operation, is dated 1650; perhaps we may imagine this was inspired by Riolanus. It is by Jan Havickz Steen.

Apparently Petit, who died in 1750, performed the first operation on the mastoid for evacuation of pus—this was probably about 1740. Petit was really one hundred and thirty years ahead of his day, as the following shows. He was an advocate

Van Leydon

of early operation, and wrote: "*These abscesses . . . may persist a long time before they cause death; but from the very first days of their formation they ought to be opened, and we ought not to wait till they have destroyed the bone,* for the patient is always in danger, *not only because of the pus which does not escape, but because of other accidents which may supervene and render the disease infinitely complicated and fatal.*" He advocated trephining the outer table of the mastoid, since even if pus was not thus evacuated it was able to escape more easily. He quotes a case in which on the 15th day of pain and some redness of the skin he advised operation, but consent was refused, and not till the 25th day could he operate. He scarcely had got through the outer table when there escaped a quantity of foul-smelling serous exudation and exfoliation took place in due course and the patient recovered. He used a trephine as well as a gouge and hammer for making the opening in the mastoid process. It is doubtful if Petit's work was given the recognition it deserved, since after this time the mastoid opening was generally done for tinnitus and to cure deafness.

In 1776 Jasser operated on the mastoid in order to evacuate pus and to cure deafness. His method of operating was to bore a hole in the bone. He then fitted the nozzle of a syringe into this hole and forced in the lotion to drive out the pus. This procedure was repeated on twelve succeeding days. He had some successes.

The operation then fell into disrepute owing to the death of Berger, the Danish Court physician, on whom it had been performed on account of tinnitus and deafness, at his own request.

Nevertheless, operations to open the mastoid must have been carried out now and then, since, in 1821, Itard wrote to condemn it.

In 1838 Dezeimeris wrote in its defence, reviewing several of the previously known cases including that of Berger, and pointing out that the adverse criticism was unfair and that the operation was to be encouraged. He collected nine cases: two for relief of deafness and one for tinnitus (fatal), six for pain and suppuration of which all recovered. It was, however, many years before his advocacy was followed—not, indeed, till 1868 or 1870.

It is of interest to notice that it took centuries to evolve the idea of opening the mastoid process for the release of pus; up to 1870 a few bold spirits only performed the operation of boring the bone to give exit to pus or to rid the patient of tinnitus. Naturally, the absence of anæsthetic and the lack of all knowledge of cleanliness retarded surgical progress; by contrast, it is striking to observe the advanced state of knowledge of anatomy and, to some extent, pathology.

Here are a few examples: In 1683 Duvernay published a very complete work on the "Organ of the Ear, containing its Uses and Diseases of all its Parts," describing the condition of suppuration in the labyrinth. In the 17th and 18th centuries Valsalva wrote his anatomical work; Morgagni, his pupil, pointed out that abscess of the brain was often secondary to disease of the ear, thereby correcting the contrary view held before. Later, Gull (1855) gave an excellent description of the pathology of lung infection secondary to lateral sinus thrombosis and showed that this was secondary to disease in the mastoid cells.

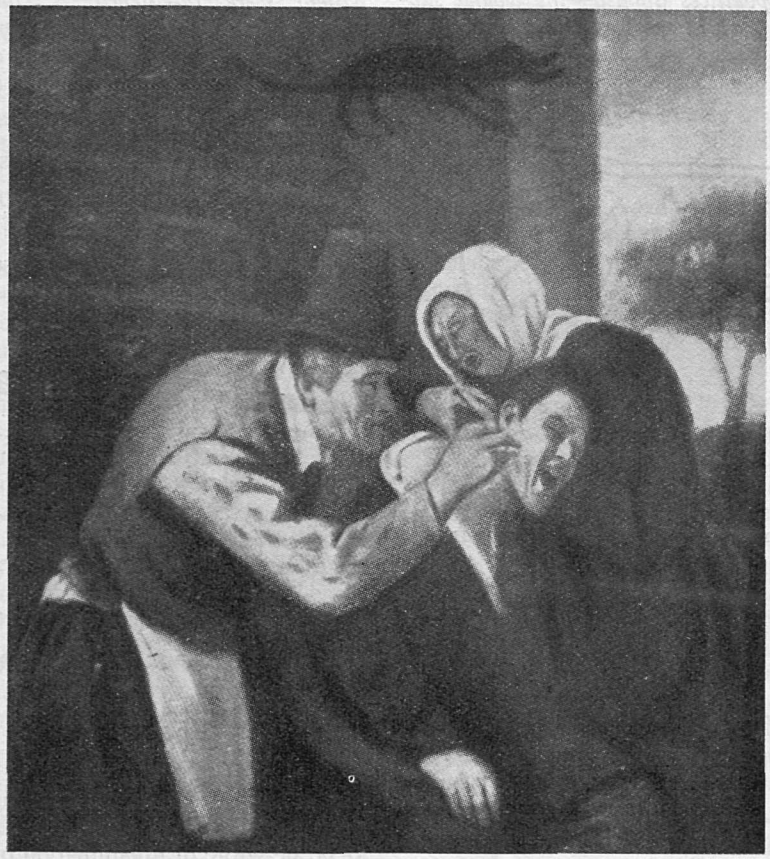
This long period of " groping for the operation," as we may call it, was brought to an end by the standard work of von Tröltsch and Schwartze; von Tröltsch's work, published in 1861, was overshadowed by that of Schwartze, to whom is given, almost universally, credit of the mastoid operation: his work was published in 1873.

Here are two pictures from Schwartze's original work. Fig. 1 represents the mastoid process and ossicles in the middle ear; the primitive arrangement of the mastoid cells radiating outwards from the antrum.

Fig. 2 shows the original operation devised by Schwartze; the mastoid opened only sufficiently to open the antrum.

For comparison, Fig. 3 represents the present-day operation, in which all mastoid cells are opened giving complete drainage of the antrum.

It is of interest to find that at this period men in different countries were evidently thinking along similar lines. Wilde in Dublin, Toynbee and Hinton in London added enormously to the knowledge of aural pathology and surgery—and we may allow ourselves to believe that they, too, influenced the progress of mastoid surgery. Wilde, in his " *Aural Surgery*," published in 1853, advocated his incision through the soft tissues and periosteum over the mastoid process for the relief of suppuration. This book was translated into German and perhaps had a direct influence in leading von Tröltsch and Schwartze to their operation.



Steen

In passing, it is delightful to think of the interesting and leisurely existence of the early English writers on the ear; thus Wilde, author of the " Practical Observations on Aural Surgery," wrote " A Voyage to Madeira, Teneriffe and along the Shores of the Mediterranean, with Observations on the Present State of Egypt, etc.; Austria its Literary, Scientific and Medical Institutions." Hinton, too, wrote many philosophical works, among others, " Mystery of Pain " (not, of course,

to be confused with Hilton's "Rest and Pain"). He was aural surgeon to our Hospital, 1860 to 1875.

Wilde's account of his incision is as follows: "*A perpendicular incision, about 2 inches long, nearly parallel with the posterior border of the auricle, is made by inserting a sharp-pointed scalpel down to the bone at the insertion of the mastoid muscle and carrying it upwards and a little backwards—a piece of lint was inserted, when bleeding stopped, linseed poultices applied—the wound suppurated kindly. Patient recovered.*"

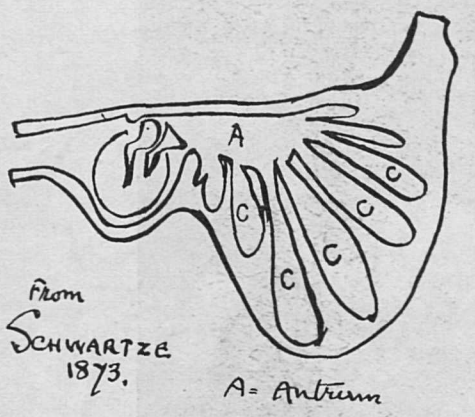


Fig. 1

To show the simple plan of cells (c) radiating from the Antrum.

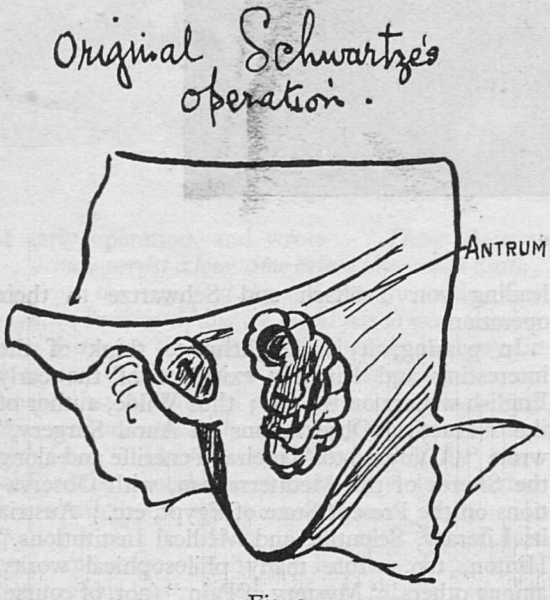


Fig. 2

In his book published 1868, Toynbee showed that he realised the importance of opening the bone; he wrote: "*Perforation of the mastoid process also suggests itself, and this operation may doubtless be performed in those cases where the matter is pent up in the cavity of the ear and is causing such urgent and serious symptoms as are likely, if not relieved, to terminate in death. I have never performed this operation, but I should not scruple to do so in a case where the life of a patient were threatened . . . the best plan of operating would be to use a trephine over the middle and posterior part of the process and to remove a portion of bone three-quarters of an inch in diameter.*"

Hinton, in his supplement to Toynbee's book, urges Wilde's incision. He also mentions the

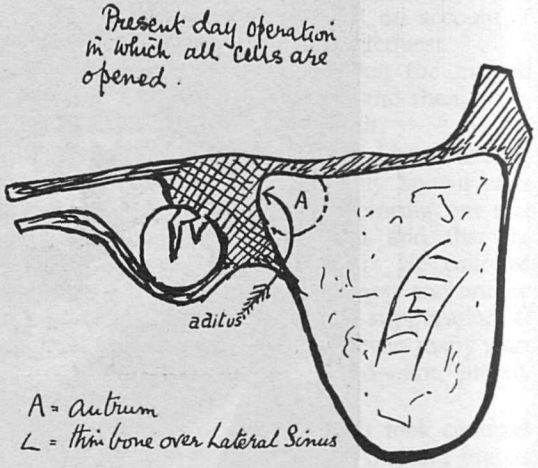


Fig. 3

importance of incising the swelling of the posterior deep meatal wall; but in his book published in 1874, he wrote of inflammation over the mastoid: "*Free incision, carried completely through the periosteum to the bone, should be made in the swollen part . . . but if the division of the periosteum over the mastoid process leaves the symptoms unchecked, the perforation of the mastoid cells should not be delayed more than a day or two. It is easily carried out. Often when pus is contained within the cells the bone is softened and the knife will penetrate it or a strong probe will break it down. When this is not the case a gouge or drill may be used; I employ a drill with a movable guard. . . .*" He used the ether spray to deaden the pain.

In America, too, the operation was performed. In his book, "Diagnosis and Treatment of Ear

Diseases," published 1880, A. H. Buck, of New York, advised operation, and quotes cases of recovery after it. Thus he wrote: "*The mastoid was opened by means of a drill applied half an inch behind meatus, a little below the level of the upper wall and directed inwards, decidedly forwards and a little upward. At a depth of three-fifths of an inch the first cell was encountered but no pus found. Two days later free discharge of pus took place.*" This he did in 1873. We thus see steady progress from Wilde in 1853 to Hinton in 1873.

This phase continued little changed for some few years, and then the operation was enlarged to include other cases as well as the acute ones, and Stacke and Jansen evolved the more drastic operation of complete removal of all the contents of the middle ear in the case of chronic suppuration. This operation we know as the *radical* operation, and its date of inception was about 1889.

In the light of our present knowledge it is clear that at first many cases were subjected to the radical operation quite unjustifiably and the total amount of hearing lost is incalculable. However, this orgy of destruction did not last long, probably not more than seven years; indeed, one of the most satisfactory features of that period, 1889 to 1897, was that those men who first advocated the radical operation were themselves the first to try and save the ossicles. Panse, Scheibe and Jansen were examples. Stacke himself advised conservative operations in 1897, only eight years after he had devised the radical operation. This then initiated the phase of conservatism.

We might express the progress of mastoid surgery in a table of "phases" for the operation: (*a*) Groping for the operation; (*b*) Establishing the operation; (*c*) Consolidating and improving. Naturally there are no sharp-cut divisions between these phases, but a gradual improvement in all directions, with many modifications in methods of operating and dressing. Progress has been intimately bound up with earlier diagnosis and with fuller knowledge of the anatomy through the outstanding work of Cheatle, never properly appreciated outside this country; X-rays have been of help. Once the conservative habit had established itself, modifications were suggested.

In this country Heath in 1904 urged conservative measures and drew attention to the importance of early operation to preserve hearing. He devised a special technique.

There were and still are opponents to the conservative operations. Some quoted cases in which the radical operation was required after the conservative had failed; others suggested that the good results of the conservative operations were due to the fact that no operation at all was required. The conservative operation meant with some the preservation of all the ossicles, but others showed that excellent results were obtained by the removal of the incus as it was so often necrosed.

At one time the presence of cholesteatoma was looked on as a direct indication for a radical operation, now this is not longer so. Beyer, writing in 1926, stated that the radical operation is primarily called for in the presence of intracranial complications. It is not required in the presence of cholesteatoma as some small collections may be cleared out of the attic successfully. He advocated the attico-antral operation; this can be performed through a posterior incision or through the meatus.

Fraser also, in 1926, wrote that: "Cholesteatoma does not necessarily mean a radical operation, though there is a slightly increased risk in performing the conservative operation when it is present." He considered the patient's safety first and kept the modified operation for cases with good hearing.

Lastly, let me sketch briefly some of the suggestions made to hasten the healing of the wound left by the operation for acute mastoiditis—the Schwartze operation or simple mastoid operation. The wound is: (1) Left open and allowed to drain and granulate; (2) Allowed to fill with blood-clot; (3) Flushed by means of the Carrell-Dakin apparatus; (4) Closed by secondary suture; (5) Filled or wiped over with bismuth and iodoform paste and sutured; (6) Filled with ambrine, either at once or in a day or two after operation; (7) Bone grafted after treatment with Carrell-Dakin fluid; (8) Treated by zinc ionisation. Though all these are ingenious and useful, the basis of success in this operation is through opening of all accessible cells.

The real and final triumph of the mastoid operation will lie in the successful treatment of all cases of acute otitis media; if need be, by the Schwartze operation, thus eliminating chronic suppuration, and the necessity for radical operation will come to be looked on as a sign of failure.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

The Psychology of Public Speaking

A Paper read to the Psychological Section of Guy's Hospital Physical Society by Sir William Young

MR. CHAIRMAN and GENTLEMEN,—I hope that the title which I have given to this paper does not suggest to any of you that I am a student of psychology or a master of public speaking in the strictly scientific sense of the term. If it does, I must disclaim any pretension of the kind. The science of psychology is studied and expounded by members of your profession with an insight and understanding which are not attainable by the mere layman, and it has been endowed with a wealth of technical terms which bewilder and overwhelm him. Nevertheless we laymen do understand what is meant by psychology in the general sense of the term, and we are conscious that psychological factors play a very large part in our daily lives. It is, therefore, as a layman, using a layman's language, that I venture to address a professional audience on what, on second thoughts, I had, perhaps, better describe as the mental and emotional processes involved in public speaking. I propose in the first place to consider the normal relations between a speaker and his audience, and in the second place to deal with the preparation and delivery of a speech.

Now, all of us have the power of speech, and we employ it naturally and spontaneously, in conversation with our fellow-men, every day of our lives. Some of us talk less, some more, and some more fluently and vividly than others; but, with rare exceptions, we are all able to express our thoughts, whatever they may be, clearly enough and proficiently enough to be understood by others. Yet most of us flinch at the thought of speaking to an audience, and comparatively few of us ever make the attempt.

Let us just glance at the points of difference between taking part in a conversation and speaking to an audience.

When you converse your thoughts and speech are stimulated by the remarks of others. You expect such a stimulus, you have a right to expect it, and if you do not receive it conversation flags. You can flit from subject to subject, or from aspect to aspect of a subject, and no sustained effort either of thought or speech is required of you. From the remarks and demeanour of others you can readily judge the impression, or changing impressions, you are making on them, and you can adapt yourself, just as readily, to the situation of the moment. If the worst happens, and conversation languishes, it is not a matter of great importance, and you feel no particular responsibility for it.

In public speaking, on the other hand, the entire responsibility is yours, and yours would be the mortification of a breakdown. A sustained effort is required of you. You have no right to expect, and you cannot count on receiving, a stimulus from the audience. Demonstrations or signs of approval or disapproval there may be, and you may receive a stimulus from them, but they may just as easily mislead or distract you. The fear that you are making a bad impression, or not making a good one, may attack and lay hold of you, and in public speaking fear is fatal. Audience-fear, as it has been rather loosely called, will wreck the delivery of what might have been a good speech, and it is the anticipation of this fear which deters many people from attempting to speak—even those who are quite capable of making the sustained effort which is necessary, and who indeed often weary us by displaying that capability in the course of conversation.

Let us examine this so-called audience-fear, for it lies at the very root of the whole matter of public speaking. Let us take the simplest case for our purpose—the case of a beginner who, in the privacy of his study, with himself as his only audience, rehearses a speech which he has previously prepared and assiduously practised until he has got it, in his opinion, perfect. I emphasise the words, "in his opinion." Others might think the speech good, or they might think it bad. The important point is that the speaker thinks it perfect. Well, the rehearsal satisfies him completely. His voice sounds right, his expression is right, the good points of the speech are brought out in the right way. The whole thing to him is admirable. He thereupon invites a friend into his study, and asks him to listen in silence while he delivers the speech. He has now an audience of two—himself and his friend. And somehow, to himself as audience, the speech does not seem to be going as well as before. His voice seems flat, his expression lifeless, the good points of the speech blunted. He wonders why. Well, the fact is, he is *consciously* submitting the speech to the judgment of his friend, he is *unconsciously* delivering it tentatively and experimentally, and the certainty and decisiveness which marked its previous delivery are lacking. His own judgment tells him that something is wrong, but he is setting his own judgment aside and waiting on his friend's judgment. And

he is anxious about his friend's judgment. And that is not the end of the matter. For all the time his anxiety is reacting injuriously on the delivery of his speech; the more the delivery deteriorates the greater grows his anxiety, and so he is involved in a vicious emotional circle.

Now in trying the effect of his speech on his friend our hypothetical budding speaker, if he but knew it, was undergoing a psychological test more severe in two respects (though not in a third) than the subsequent ordeal of delivering it to a set audience. Firstly, he was consciously *trying* the effect of his speech, whereas when he faces a set audience he has the consciousness that the die is cast for good or ill, that it is no longer a question of trying but of doing. I do not need to convince you of the bracing effect on the mind of committing oneself to a course of action after a period of doubt and hesitation. Instances in your own private lives will occur to you. I pass to the second point. All the time our budding speaker was delivering the speech to his friend he was sharply conscious of a personality as active as his own, and keyed up to the definite task of adjudicating on the speech. But when he faces an audience he has a blurred impression of a mass of people with a mass-personality which is not active but inactive, not definite but ambiguous. Just as the eye sees a crowd as a crowd, and not as a number of distinguishable individuals, so the mind unconsciously attributes to it a crowd personality. And an audience, we must remember, is a silent and a motionless crowd.

If he had nothing more to contend with than this impression of an audience-personality it would not be so bad for our budding speaker. But unhappily he receives a further impression—an impression of his own active and keyed-up personality standing out in marked contrast to the inactive and ambiguous mass-personality of the audience. And at the first sound of his own voice this impression becomes alarmingly acute. He begins to fear that he has undertaken a task too big for him. He directs his gaze at a particular person in the audience in the hope that, as he has been told, he will thereby escape the impression of the mass-audience. But he finds he has merely added an impression of one person to the impression of a mass of persons. And the fear that he has undertaken too big a task remains. If he does not overcome it, the delivery of his speech will suffer, as it suffered in the presence of his friend.

We see, then, that on both occasions it is loss of confidence in himself and his speech which troubles him, and this is a result of his being regardful of the audience when he should only be regardful of his speech. His mental attitude is one of delivering the speech to the audience and asking for their favourable judgment, when it should be one of delivering it to himself as audience according to his own good judgment, and allowing the other audience to hear it and judge it as they may. He permits himself to wonder what they are thinking, when all his attention should be devoted to the speech. A speaker cannot, of course, shut his mind completely against his audience and assume, so to speak, that they are not there. But he should keep the audience in their proper place in his mind in relation to the speech—that is, he should keep them entirely subordinate to the speech.

It follows from this that a speaker should never allow applause or interruptions to deflect or distract him from his speech. If a swift retort to an interruption does not occur to him he should ignore the interruption. And he should sternly repress any feeling of elation when he is applauded, for elation may unbalance him.

I turn to the question of audience-personality. The personality of an audience is not the sum total of the personalities of the individuals composing it. Fortunately for the speaker, it is something less than that, and something different from that. An audience is an assembly of listeners, every one of whom has for the time being surrendered to the speaker something of his personality in consenting, as he does, to give the speaker a hearing. There may be individuals who are hostile to the speaker or his views, but their hostility is held in abeyance. I purposely ignore the case of individuals who may be there to heckle or shout him down, because they are not audience-elements proper, and we are considering an audience as a normal audience. Taking them as a whole, the individuals composing an audience are a collective unit, and when the speaker rises to his feet this unit is in a state of mind which is passive, receptive, expectant, uncritical, tolerant and, if there is a bias at all, favourably and not unfavourably disposed towards him. While the speaker has keyed-up his personality for the effort of speaking, the audience has keyed-down its personality to the effortless duty of listening. It does not want the speaker to be seized with audience-fear, for that would make it feel uncomfortable. It does not want to be bored, but it would suffer a boring speech philosophically. It does not expect a great deal from a speaker, unless he happens to be a speaker of some renown. But it does expect a speaker sincerely and earnestly to do his best. If a speech arouses and holds its interest it will be generous in its appreciation. If its higher emotions are touched it will be enthusiastic.

But an audience will react unfavourably to the intrusion of a speaker's personality. A speech is as much a work of art as a painting or a novel. The painter or the writer expresses his personality in his work, but it is his work, not his personality, that comes to public judgment. So in public speaking it is the speech, not the speaker, which the audience are there to judge, and they can only be said to judge his personality in the sense that they judge his speech, which is stamped with the hall-mark of his personality. But just because the speaker presents and executes his work in the presence of the audience, with voice, manner, expression and gesture all his own, he is liable to be misled into thinking that the audience are as much concerned with his personality as his speech. Have we not often heard an after-dinner speaker opening his remarks with the excuse that he has not had time to prepare a proper speech? Or the other familiar type who introduces himself as one who is unused to public speaking? In effect the former says, " Please don't judge me by the speech I am about to make. You may think it good or you may think it bad, but you can take it from me it is below my usual standard." And in effect the latter says : " I am really no speaker, and you will agree, therefore, that I am a bit of a sport in rising to address you." The audience inevitably react to remarks of this kind with the sub-conscious thought that the speaker ought not to speak at all, and they prepare themselves to do the very thing he does not wish them to do, viz., form a judgment unfavourable to him.

When a speaker intrudes his personality by a betrayal of conceit, self-satisfaction, self-complacency or patronage, he is likely to rouse resentment in an audience, because the audience feel that he is abusing his privileged position as a speaker. To an audience a speaker is the vehicle of a speech, not a personality. And this is largely true even in the case of a speaker who has attained eminence in some walk of life or another. An audience will undoubtedly be interested in seeing a famous man and hearing him speak, but it is the speech, not the man himself, that will make a good or bad impression on them. You will sometimes hear it said of a public man, " I heard so-and-so speak last night. He made a wonderful speech." Or, " I was disappointed with his speech." Or, " Of course, there must be a lot in him, but you wouldn't have gathered it from his speech."

Let me state the gist of this part of the paper in a few sentences. The understanding between a speaker and his audience is that the speaker shall make a speech and the audience shall listen to it. Making a speech means nothing more and nothing less than making a speech. It does not include appealing for the good opinion of the audience or holding oneself out for the admiration of the audience. It does not exclude any effort on the part of the speaker to make the best speech (appropriate to the occasion) of which he is capable. The speaker should have the utmost belief in his speech, and he should deliver it with the sureness and decisiveness which that belief justifies. He should not allow thoughts of the audience to deflect him from his task.

I come now to the matter of the preparation and delivery of a speech. First let me say that if some of my remarks are framed in a form which appear to you to be instructional, I have only adopted that form because it appears to me to be the most convenient and effective for my purpose. That purpose is to indicate and annotate the psychological considerations (or, if you will, the mental and emotional factors) to which a speaker should have regard in selecting and arranging his speech matter, in preparing the text of his speech, and in delivering his speech.

There are, of course, many kinds of speeches. There are political and propagandist speeches, whose purpose is to persuade; there are informative and educational speeches, such as the lectures you listen to, or are expected to listen to, in this institution; there are sermons and scholarly addresses; and there is a great variety of non-descript speeches, such as after-dinner, conventional and ceremonial speeches. The first essential of a speech is that it should interest, that is, that it should engage and hold the attention of the audience. If it does not do that it will fail in its purpose, whether that purpose is to persuade, or to inform, or to entertain, or to amuse, or to inspire, or to stir the emotions, or whether it is two or more of these in combination. In actual execution the essential attribute of interest is so involved with the purpose that the two are largely indistinguishable, but, considering them separately, it may be said that within the domain of interest a speaker can find guidance from textbooks on elocution and the experience of others, while within the domain of purpose he will find that his own taste and judgment come more and more into play. And, after all, the speech he makes must be his own. There are no standards in speeches. A speaker, for example, who wishes to amuse will select speech-matter which he thinks will amuse others because it amuses him, and he will deliver it in a way which he thinks is amusing. Similarly, if he wishes to affect the emotions he will be guided by what affects his own emotions. There is no other guide for him.

With these preliminary remarks I now proceed to consider speech-matter.

If a speech is to be on a specified subject it may be assumed that the audience are interested in that subject, or in what you, the speaker, may have to say about it, otherwise they would not be there to listen. But you will disappoint or annoy them if your speech matter is not closely related to the subject, or only touches the fringes of it, or evades an exposition of it where an exposition may reasonably be expected. This, you may say, is obvious. But my only reason for mentioning it is that I have listened to many speakers to whom it did not appear to be obvious.

When your speech is not to be on a specified subject, and you are left a comparatively free hand, as, for instance, where you have to propose or respond to an after-dinner toast, you must choose speech-matter which is likely to appeal to the audience, having regard to their social and intellectual standing, and the interest which has brought them together on the occasion. You can but do your best in choosing, and the audience, having no preconceived notion of your speech-matter, will be indulgent towards your choice.

Speech-matter may be light or it may be serious, or a speech may include both kinds. In the last case, you must so arrange and present the matter that the audience are never in doubt as to when it is light and when it is serious, otherwise they may disconcert you by laughing at the wrong place. The mind of the audience has to wait upon and follow closely upon your words, and it will sometimes put a wrong construction on them because of something you have previously said. If you wish to say something impressively serious in the course of a speech which is otherwise of a light nature, you should reserve it for the end. Lightness following gravity lessens, if it does not destroy, the effect of gravity. Gravity, when it follows lightness, gains immensely in impressiveness.

If you feel you must tell a funny story, it should be so woven into the speech that it appears to be an integral part of it. It should never be introduced in a way which suggests, " Now I am going to tell you a story," because that will interrupt the natural flow of the speech, and so react unfavourably both on yourself and the audience. Having told the story after an introduction of that kind, you will find that it requires an effort to get back into your stride and to carry the audience with you. An objection to funny stories is that the audience assume that they are not original, and that you are merely using them as padding. If, in spite of that, you decide, for other reasons, to work a story into your speech, let it be one invented by yourself—it is not a very difficult matter—or at least one so remodelled by you that it has almost become your own. Originality has a tonic effect on a speaker, and the absence of it is enervating. For the same reason, you should avoid long quotations of poetry or other literary matter. They also interrupt the flow of a speech, and they sometimes weary the audience as well.

I pass now from speech-matter with the remark that whatever your speech-matter may be, your treatment of it in the way of clothing it in language, and giving utterance to that language, is of vital importance. There is no speech-matter so dull that an interesting speaker cannot make it interesting, and no matter so interesting that a dull speaker cannot make it abominably dull.

Now, you will agree that all literary composition is prepared primarily for the understanding. But, subject to that, it can be divided into two kinds, which may be described as Writing for the Eye and Writing for the Ear. Scientific textbooks, for example, are written for the eye. Poetry is written for the ear. Prose also is written for the ear when it has regard to the niceties of vowel sounds, to the sharpness, bluntness, crispness, and other qualities of consonants ; to alliteration and similar devices ; and to all the phonic elements which are included in the comprehensive term, Rhythm. When you read something which has been written for the ear, you not only take in the meaning of it, but you also derive an auditory pleasure from it, although you are not reading it aloud. You hear it through what has been called " the mental ear."

Now, to the two classes of writing which I have mentioned, namely, Writing for the Eye and Writing for the Ear, we must add a third class, namely, Writing for Speaking. When you have selected your speech-matter and proceed to prepare the actual text of your speech (whether you write it out, or sketch it out, or, if you are unusually gifted, think it out without committing it to paper), you must not only prepare it for the ear, but you must also have the utmost regard to the fact that you are not preparing something which is going to be read by the audience, and in being read reach their mental ear, but that you are preparing something which has to be conveyed to their physical ear and their understanding by the voice—and by your voice of all voices. In other words, the text of your speech (as distinct from the speech-matter) should be such that when spoken by you it will appeal to the understanding of the audience by reason of its variety and clearness, and will appeal to the ear of the audience by reason of its qualities and quantities of sounds and of combinations and associations of sounds.

Your text, for example, should avoid anything which requires a special effort on your part to speak it distinctly and clearly, or on the part of the audience to understand it. You will therefore aim at simplicity of language and avoid long involved sentences. Awkward word associations and unpleasant sound associations should also be avoided, such as " the preceding proceedings," " the depth throughout," " generally energetic," and the well-known " truly rural." Always choose a word which sounds best to you, and is most easily pronounced in the context. For example, in drafting this paper I wrote, " Audience-fear will ruin the delivery of a speech." I altered this to " Audience-fear will wreck the delivery of a speech." Uniformity of clauses and sentences tends to weary an audience. Variety stimulates their interest. For example, I wrote, " In public speaking the entire responsibility is yours, and the mortification of a breakdown would be yours." I turned the last clause round to " and yours would be the mortification of a breakdown."

The pace at which your text can be spoken, and the pace at which it *is* spoken, are important. A reader reads a closely-reasoned piece of writing at his own pace, and pauses or goes back on the text when necessary, but a speaker sets the pace for his audience. The text of a speech, therefore, should not be so thickly studded with points that unless it is spoken with unnatural slowness the audience have no time, so to speak, to draw breath between the points, and may even miss some of them altogether. The pace of speaking should be varied as the text requires or permits, but it should never be too fast for the understanding of the audience. A speaker instinctively tends to go too fast rather than too slow. Variations should be frequent and unobtrusively made. The unimportant words in a clause or sentence should be spoken faster than the important ones. You should aim at a general effect of variety and smoothness as opposed to monotonous regularity on the one hand and jerkiness and unevenness on the other.

Where possible, you should put the point of a sentence right at the end. A point is most effectively made if you take your leave of it immediately you have made it. To add interpreting or conditioning words will weaken it. You all know how the point of a joke is spoiled by explaining it. I altered a sentence in my draft in order to get the point at the very end, and also to enable me to employ a device which is known as the Oratorical Pause. The sentence first stood as follows : " The fear that he is making a bad impression may attack and lay hold of him, and fear is fatal in public speaking." As revised and spoken the last clause ran, " and in public speaking —fear is fatal." Note the effect of the pause before the word " fear."

The Oratorical Pause is a deliberate lengthening of what I may call the Speaking Pause. If you read something aloud you will find that in order to be distinct, and incidentally to assist your breathing, you must make a slight, almost imperceptible, pause at many places besides those indicated by punctuation marks. This is the Speaking Pause, and it is involved in the question of pace to which I have already referred. It is a most important factor in speaking.

There is a device known as Suspense which can be used with subtle effect on the mind of the audience. A very elementary example from this paper will explain the nature of it. You remember that I mentioned writing for the eye and writing for the ear, and that I went on to say, " Scientific textbooks are written for the eye. Poetry—" here I paused, and your minds at once leaped to anticipate the words, " is written for the ear." When I actually spoke those words you had a satisfied feeling. At any rate, that is what I aimed at. This I may call Satisfied Suspense. There is also what I may call Surprised Suspense. You will remember me saying, " There is no matter so dull that an interesting speaker cannot make it interesting, and no matter so interesting that a dull speaker cannot make it——." You were certain from the context that I was going to say " dull." But I gave you a little surprise by saying " abominably dull." At all events I intended to surprise you. These, as I say, are very elementary examples. In its higher forms, the psychological value of suspense can hardly be exaggerated.

There are other details which I can do no more than mention in the time at my disposal. They are partly psychological and partly mechanical. *Accent* is the stress laid on a syllable, or on syllables, in a word. It gives life to a word. *Emphasis* gives prominence to the key-word in a sentence or the key-sentence or key-clause in a series. Emphasis in the wrong place is the commonest of faults. *Poise* means poising or lingering on a word to convey its meaning in the fullest degree to the audience. *Inflection* means sliding the voice from one note to another so as to indicate the relative value of words or clauses in a sentence. Then there is the vital element of *Expression*, which in part is derived from attention to the various details I have mentioned, and discrimination in the use of devices, and in part is something imported from the speaker's personality, such as earnestness, intensity, fire, force, coldness, calmness, warmth, conviction.

My last few words are about the voice. I do not know whether or how far the quality or character of a man's voice is determined by his particular habit in the use of his vocal organs, or whether it is wholly determined for all time by some particular physical condition or conditions in the vocal organs themselves. But, whatever the quality of a man's voice, he can increase its volume and strength by intelligent practice, and can range from a lower to a higher tone, the length of range varying in different individuals. In making a speech you should start on your middle or ordinary tone, and as the speech proceeds you should modulate the voice, that is, rise to a higher or fall to a lower tone as your feelings suggest, always coming back to the middle tone. Modulation imparts variety, expression and feeling to your delivery, and contributes to naturalness, which should always be the aim of a speaker. Do not mislead yourself into thinking that your platform voice must be something different from your natural voice. You must, of course, speak loudly enough to be heard by the audience. But remember that mere loudness is not necessarily clearness.

I conclude with a warning, the gravity of which you will appreciate from the fact that I have kept it for the very end. Whatever feeling you express in a speech, take care that it does not master you. Keep it under control. If you let it control you, you are no longer the master of your voice or your speech.

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Polevski (J.): The Heart Visible—A Clinical Study in Cardiovascular Roentgenology in Heart Disease. Davis. Phil., 1936, pp. 207. (Hunt Memorial Library.)

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Solomons (Bethel) and Falkiner (Ninian McIntire): Tweedy's Practical Obstetrics. 7th edition. Oxford University Press, 1937, pp. 773.

Stewart (Sir James Purves-). *See* Purves-Stewart.

Savill (Agnes): The Hair and Scalp. Arnold, 1935, pp. 288.

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Periodicals.

Medical Classics has been added to the Periodical Subscription List.

Presentation to Mr. Eason

ON Tuesday, 27th July, a large and representative gathering of the nursing and lay staffs of the Hospital and School met in the Court Room to pay tribute to Mr. Eason on his retirement from the office of Superintendent of the Hospital.

The official meeting was preceded by tea, kindly provided by the Matron and much enjoyed by all.

The Chair was taken by the Matron and on the platform were Mr. and Mrs. Eason and Miss Neeld, Messrs. Brooke, Winston and Beale.

After a short introduction the Matron was asked to make the presentation. The Matron referred in feeling terms to the invaluable help rendered by Mr. Eason to all at the Hospital. The presentation was received amid the cheers of all those present.

Mr. Eason in his reply said :—

Words really fail me to express my feelings on such an occasion, and adequately to convey my thanks to all my colleagues and friends on the administrative and nursing staff who have joined together to make this presentation to my wife and myself. After so many years one can hardly realise that one is going almost completely to sever one's active relations with Guy's Hospital; but one can comfort oneself with the thought that the Hospital will carry on just as well in the future as it has in the past. The spirit of Guy's Hospital has always been the envy of other hospitals, and I like to think that that spirit emanates from the humanity and loving kindness of our founder, who lies beneath the Chapel, and who I also like to think knows somehow that his work is being carried on as he would wish.

Having sat at every meal for the last seventeen years opposite Thomas Guy's portrait with his eyes fixed upon me, I have not been able to avoid the feeling that he has been watching me, and that feeling has always prompted me to do my best in good times and in bad to carry on the work he set us to do. And I think that spirit has animated all of us who, so to speak, work behind the scenes and set the stage for the medical and surgical staff, who do the actual work of healing.

Having lived among you all for so long I can appreciate better than anyone the standard of work which you have done. I should like here and now to pay my tribute to the craftsmanship of all the members of the staff of the Works Department. Their work, whether it be construction, plumbing, joinery, electrical work or any other of the manifold trades comprised in our Works Department, has always been of the best—made to endure, fashioned with the care of the craftsman who would scorn to scamp his work.

Similarly I can say without the slightest hesitation that I have always been proud of the work of the clerical and administrative staff. In saying goodbye to Mr. Beale I am bidding farewell to one of my oldest friends at Guy's and one of the most trusted officers who ever served Guy's Hospital. I cannot mention all by name, but I should like to place on record my appreciation of the invaluable work of all the female administrative staff, from Miss Neeld, my secretary, and incidentally both my memory and my private conscience, down to the latest recruit in the junior branches. In every department, the Almoner's Office, the Enquiry Office and the Matron's, wherever I see their books, their typewriting or their duplicating, I know that I could show the work with justifiable pride to any visitor.

As regards the Nursing Staff, I find it difficult to express my admiration for the work that they do year after year. My sympathy has always gone out to the Sisters, who, year in, year out, wrestle with patients, relatives, house officers and young probationers (not necessarily in that order of importance or difficulty). How they survive this harassing life is a mystery to me, but they do somehow, and some of them even rise to take on the even more harassing life of a Matron. And, as I have often said, once a Matron nothing can kill you. They all live for ever.

The nurses also have in many ways a harder job than the administrative staff. We only deal with papers, reports and inanimate duties. They have the harder task of dealing with the sick, with people whose tempers are often on edge, whose sense of perspective is temporarily warped and who may be very difficult to please. All these duties they have to perform in the middle of a hard course of training with examinations always over their heads. When I think of the thousands of persons who are treated here every year and of the minute number of complaints I am full of admiration for the services of the Nursing Staff.

One should always remember that in a hospital the lasting impressing that a patient gets is, firstly, from the porter he sees at the Front Entrance and, secondly, the first nurse he or she speaks to in the ward. These two strike the note. I hope that it may always be a pleasant one.

Mr. Brooke's department is the only department of the Hospital which is not under my immediate supervision and control, but I can, as a constant and sometimes an inquiring visitor to the Counting House, testify in the same way to their efficiency, and I am sure that we are all saying goodbye with deep regret to Mr. Brooke, who has been such a charming colleague with us all.

But efficiency is not everything. Above all, what has made Guy's such a happy place to work in is the fellow feeling and the atmosphere. At any time the administrative staff and the Works Department have always been ready at a moment's notice to work hard, work overtime, and do any mortal thing, and that willingly, that I have asked them. And I have often told people in other places and institutions that I have at Guy's no

need to give an order; I need only ask and the thing is done.

My reward for seventeen years' work at Guy's as Superintendent is here this afternoon. The goodwill of my fellow officials and servants touches me more than anything that I can express. And I can only tell you all with what interest I shall watch your work in the future. In spirit I am certainly not leaving you.

What you are presenting us with this afternoon, my wife, as is the way of wives, will dispose of as she thinks fit. And in saying this I also wish to tell you all, as well you know already, how much she has helped me in my work here. You all know her, and she knows you all, as a friend who is deeply interested in everything and every person working in the Hospital. She it is who has been able to translate my somewhat official aloofness into that friendly and personal relationship which has made both our lives so happy here.

I can say no more, except to say how relieved I am to know that the Dean is going to succeed me. In him I am sure you will find one who will carry on the great traditions and the comradeship of the administrative staff. Goodbye and God bless you all.

At the conclusion of the speech three very hearty cheers were given for Mr. Eason.

Reviews

The Citadel. By A. J. CRONIN, M.D., M.R.C.P. Published by Messrs. Gollancz, Ltd. Pp. 446. *Price* 8*s.* 6*d.*

THERE can be very few people connected with the medical profession in England who have not by now heard of this book. Many of you, thirsting to get at it, will have been reassured by Mr. Victor Gollancz's intimate little story, told in the Sunday advertisements, of his difficulty in having enough copies printed to satisfy the demand and his plans for overcoming it. My recommendation, dear readers, is that there is time enough; if you wait six months, or for the matter of that sixteen years, you won't be missing much. Do not be disturbed by the fact that twenty-five thousand copies of the book were sold in the first two and a half days; if your anxiety is for a first-class novel, you have not got it here; if you want a steaming-hot dish of scandal, redolent with odours from the basements and backstairs of Harley Street, you have not got that either.

Be calm.

This novel is a trilogy which tells of the spiritual vicissitudes of a young doctor. The general arrangement is one which has been used before: the first part treats with ideals and the rewards of honesty; the second with the awakening of greed and spiritual decline, and the third with resurrection, with all coming right in the end and the bells of Heaven pealing in the distance.

Dr. Arthur Manson, the hero, is the typical Scot of fiction. Gawkish, gauche, uneducated, he is a raw young graduate who hides a romantic disposition behind a dour *façade.* He is generous, courageous and determined; he has his pride, but he combines his native reserve with a certain hot-headedness in the emergency. In fact, he is uncertain of himself and lacks self-control, he is silent when he should speak, and speaks when he should be silent—a property which leads to several difficult dilemmas. But we are never left in doubt that beneath it all there beats a heart of at least twenty-two carat purity.

With this equipment and a St. Andrew's M.B. he plods honestly, and on the whole successfully, in a Welsh mining practice. He controls an epidemic of typhoid, finally having recourse to blowing up the sewer, and, from antagonism, wins through to respect. Perhaps his most remarkable feat was a successful outcome in a case of asphyxia pallida despite his treatment of placing the infant in hot and cold water alternately. But then he was admittedly inexperienced, and did not take his M.R.C.P. until several chapters later.

In spite of great difficulties he succeeds in a competent piece of research work on anthracosis and in marrying the village schoolmistress. These achievements, acting together, stir him to further ambition, and he is appointed to work in a Government Department, in which, however, he becomes enervated and discouraged by departmental futilities; he decides to practise again. But he cannot afford to buy any good-class practice, and sets up in *déclassé* surroundings near Paddington. After a period of bitter poverty and privation he starts to make money, and the joy of it obsesses him. A number of fortunate accidents and some

less fortunate acquaintances introduce him to a wider circle. He starts to achieve success. He does nothing outrageously dishonest, but is a half-hearted rogue. He is a party to dichotomy once or twice, not fully, it seems, realising what he is doing, and in his secret heart he blames himself for giving patients medicine which they could do without. To one lady he gives a course of injections for hay fever of a substance which he knows to be useless, but which she demands. In fact, from being an earnest young Martin Arrowsmith, he becomes a member of a gold rush; his wife, an altogether admirable character (but, as is the way of such, not very convincingly drawn), suffers this spiritual decline for the most part in reproachful silence. As a result of an unfortunate accident in the early Welsh days, she can have no children, and, lacking this bond, they drift apart, in spirit if not in space. A ray of hope is just now afforded by his appointment, through a little personal wire-pulling, to a reputable chest hospital. But no; there are many financial schemes in the offing. There is a chance of much money to be made on the stock market if he keeps in with a wealthy patient who holds a controlling interest in a somewhat bogus drug firm, and he is tentatively asked to join in a ring by some of his acquaintances who make a practice of asking unnecessary second opinions among each other and keep up the credit side by unnecessary operations and expensive treatments. While he is considering these things disaster overtakes him, and rightly so.

He is called to a case of a middle-aged man with an abdominal tumour. This appears for some reason (perhaps it fluctuated) to be of a cystic nature, and he decides that it must be removed. His suggestion of a hospital is turned down in favour of a nursing home. "We must, though poor, have the best," the relatives say. Now, who shall do the operation? And then we arrive at the remarkable position that this Member of the Royal College of Physicians, who is on the staff of a reputable chest hospital and has been in London practice for very many months, does not know the name of a single surgeon other than a dichotomist holding only the M.R.C.S. degree, whom he happens to have met at a party. We are expressly told in the text that Dr. Manson has a medical directory in his house. Why, if he did not know the name of any other surgeon, he did not use this work of reference will always remain, to me, a mystery. But he does not use it; the dichotomist is called in, and the hero pays the penalty for his lack of observation and resource. The cyst is delivered into the wound; Mr. Ivory, M.R.C.S., cannot seize it by the pedicle, and so incises it; there is profuse hæmorrhage, and seemingly in a second the patient dies:—

"Ye fearful saints fresh courage take,
The clouds ye so much dread
Are big with mercy and shall break
In blessings on your head."

So overcome with remorse and repentance is the hero that metaphorically he returns home in a hair shirt and sandals and undergoes a spiritual *resorgimento* on the bosom of his wife—of which admirable lady we hear little more, for she is now unfortunately run over in dashing out to buy the prodigal a bit of cheese. It remains only for the hero to be called before the General Medical Council and within an ace of being struck off, before we leave him to settle in honest practice with two old associates, one of whom is a reformed drunkard. There, in a Midland town and complete integrity, we leave them specialising together, one doing the medicine, one the surgery, one the bacteriology.

Well, readers, that is the story; of course it has other features which may go to make it complete as a successful modern novel; there is an operation without an anæsthetic, far away in the recesses of a mine; there is an abortion; there is the word "bugger" in full print for you all to read; there is a clandestine love affair with a Society woman, a certain amount of moist-eyed emotion from grateful patients and some redundant sentimental clap-trap. And some of the scenes read well, and the story is a good one.

We may indeed ask the question: Why has the book this amazing popularity? It is not a very easy question to answer. In the first place, it is a fact that books by doctors seem to command a large circulation. We have discussed the matter in these columns before. It is partly perhaps because the doctor may have a great influence on people's lives; he is called in and much may depend on his decision and even, perhaps, some destinies may hang on his ability; in spite of which he is for the most part a resource—like a camp bed—to be used in the emergency; he is an extraordinary, not an integral part of his patients' lives. And when he suddenly pronounces, away from the bedside and medical matters, it is something of a phenomenon, rather as though the furniture had come to life; it is something to be looked into.

Again, as we have said before, since Medicine is such a mystery to the layman, the doctor is invested, however slightly, with something of the mystic, considered as a man of special knowledge who sees behind the scenes, rather as though he could write down, for all to read, the secret of life at seven and six a time.

Again the doctor has, perhaps, and the psychi-

atrist in particular, taken on something of the function of the Church in the part that he plays in the life of the people. Through all these things he has a little added importance, as though his utterances might be important too. Further, the public has, perhaps, been led to expect much from the profession by the example of Mr. Maugham, and to a lesser extent of Dr. Axel Munthe, Mr. James Bridie and Mr. Deeping.

Whatever be the reasons, it seems that the fact of the author being a doctor must play some part in commanding public regard, else why is it made much of? And one can hardly think that the works of Dr. Halliday Sutherland or Dr. Robert Collis can have secured their sales on their literary merits alone.

Thus, his medical qualification may be one factor in Dr. Cronin's success, and bound up with this is his own reputation as a novelist. He has published four previous novels, of which I have read only two. "Hatter's Castle" and "The Stars Look Down" were acknowledged successes, and I found myself wondering at the time why they should be so. "The Stars Look Down" seemed to me in no way to fulfil the promise of its lovely title; it was facile, bold but without restraint. "Hatter's Castle," a stark story, was rendered nugatory through having been anticipated some twenty-five or so years earlier by Douglas's "House with the Green Shutters," a work of genius which it would be too much to expect a writer of Dr. Cronin's talents to equal. One supposes that it is his reputation for "realism" and his ability to tell a story that has led the public eagerly to watch for further productions from Dr. Cronin's pen.

Other factors in the popularity of "The Citadel" of which we can be more certain, apart from the fact that the author is a doctor and apart from his previous reputation as a novelist, are the enterprise and energy of Mr. Gollancz; and, finally, the nature of the subject matter. Any novel which is characterised as "about graft and quackery among doctors" is bound to raise excitement.

There seems to be an idea disseminated about London that this book is an attack on Harley Street in particular and the profession as a whole. It has been described as "vitriolic" and as an "exposure of the consultants." How such an idea can have been conceived is difficult to understand. It is true that there are stories told of incompetence in the Welsh valleys, and they are in all probability true, though one has difficulty in crediting that there was a practitioner who knew neither difference nor distinction between the pancreas and the thymus. It seems quite credible that there may have been, and may be now, medical officers of health who are inaccessible and dilatory. It seems perfectly certain, and seemed so long before reading Dr. Cronin, that panel practice leaves very much to be desired, both from the patient's and from the doctor's point of view. There is no difficulty in believing that certificates are being given now, and have been given for years, without adequate examination and for no good reason at all. Further, though speaking without first-hand knowledge of such practices, it seems quite possible that there are many practitioners between Marylebone Road and Wigmore Street who see and treat patients unnecessarily often, who exploit patients, who send patients to and from one another when there is no need. Yes, one believes that all these things happen. But one does not believe that they happen throughout the length of Harley Street and Wimpole Street. In fact, one knows that they do not, nor has Dr. Cronin, in his book, implied that they did. His exposure is limited to a small clique of men, men without hospital appointments and without the higher qualifications, who have battened on a few patients by suave address.

I do not know, in interviews and in the subsequent heat of the fray, to what indiscretions Dr. Cronin may or may not have been led; the newspapers are always so obligingly ready to help a man to expose himself. But I do feel that in this book he has not said too much; he may have opened a little the public eye, but he has said nothing that one would reasonably expect to arouse such pother and ado.

Hospital Appointments

MEDICAL SCHOOL

THE following appointments and reappointments have been made by the School Council; duties to commence on October 1st, 1937:—

Medical Registrars—

Dr. R. S. Bruce Pearson, reappointed for one year.

Dr. H. A. Treble, reappointed for one year.

Resident Surgical Officers and Registrars—
Mr. W. J. Ferguson, reappointed for one year.
Mr. J. E. Spalding, appointed for two years.

Clinical Tutor in Charge of the Preliminary Clinical Period—
Dr. G. A. M. Lintott, reappointed for one year.

Obstetric Assistant—
Mr. J. B. Blaikley, reappointed for one year.

Obstetric Registrar—
Mr. H. A. Hamilton, appointed for two years.

Demonstrator of Anatomy, Whole-time—
Mr. H. R. S. Harley, appointed for two years.

Demonstrators of Anatomy, Part-time—
Mr. P. W. Clarkson, appointed for two years.
Mr. I. G. Robin, reappointed for one year.

Resident Anæsthetist—
Mr. R. W. Cope, reappointed for six months.

Demonstrator of Pathology, with Charge of Clinical Laboratory—
Dr. R. L. Waterfield, reappointed for one year.

Demonstrator of Pathology, Part-time—
Mr. M. R. Kark, appointed for one year.

Anderson Demonstrator of Clinical Chemistry—
Mr. M. Lubran, appointed for two years.

Demonstrator of Pharmacology—
Mr. J. M. Brown, appointed for two years.

Demonstrators of Physiology, Part-time—
Mr. G. D. Channell, appointed for two years.
Mr. M. Lubran, appointed for two years.
Mr. J. M. Brown, appointed for two years.

Demonstrators of Chemistry, Whole-time—
Mr. F. H. Brain, reappointed for one year.
Dr. B. Levin, reappointed for one year.

Demonstrator of Chemistry, Part-time—
Mr. S. Holt, reappointed for one year.

Demonstrator of Physics, Whole-time—
Dr. A. C. R. Wakeman, reappointed for one year.

Demonstrators of Physics, Part-time—
Mr. C. W. Wilson, appointed for one year.
Mr. J. L. O. G. Michiels, appointed for one year.

Demonstrators of Biology, Whole-time—
Mr. E. W. Baxter, reappointed for one year.
Mr. J. Wilkie, reappointed for one year.

DENTAL SCHOOL

THE following appointments and reappointments have been made by the School Council; duties to commence on October 1st, 1937 :—

Half-time Assistant to the Director of the Conservation Room—
Mr. W. A. Steiner, reappointed for one year.

Half-time Assistant to the Director of the Dental Prosthetic Laboratory—
Mr. H. C. Davis, appointed for one year.

Administrative Dental Officer—
Mr. G. S. Loader, reappointed for one year.

Registrars in the Dental Department for Children—
Mr. K. E. Pringle, reappointed for one year.
Mr. H. Richards, reappointed for one year.

Demonstrators of Operative Dental Surgery, Morning Attendance—
Mr. G. R. Down, appointed for one year.
Mr. W. A. Vale, appointed for one year.
Mr. R. O. Holland, reappointed for one year.
Mr. C. S. Henderson, reappointed for one year.
Mr. C. S. Pitt, reappointed for one year.
Mr. H. B. Smith, reappointed for one year.

Demonstrators of Operative Dental Surgery, Afternoon Attendance—
Mr. E. A. Lloyd, reappointed for four years.
Mr. H. H. Kenshole, reappointed for one year.
Mr. A. R. F. Thompson, reappointed for one year.

Demonstrators of Dental Prosthetics—
Mr. H. A. M. Ching, reappointed for one year.
Mr. G. Ellingham, reappointed for one year.
Mr. J. W. Mansie, reappointed for one year.
Mr. R. J. Wheatley, reappointed for one year.

Assistant Bacteriologist (Dental)—
Mr. C. W. Shuttleworth, reappointed for one year.

Demonstrator of Dental Bacteriology—
Mr. C. S. Henderson, reappointed for one year.

Demonstrator of Dental Histology—
Mr. J. W. Mansie, reappointed for one year.

Assistant Curator to the Dental Section of the Gordon Museum—
Mr. A. R. F. Thompson, reappointed for one year.

AT a meeting of the School Council held on the 6th instant, applications for Junior Staff Appointments were considered, and it was agreed to make the following recommendations for appointments and reappointments, duties to commence on October 1st, 1937 :—

Assistant Director (Female) of Venereal Diseases Department—
Miss M. Rawlins, M.B., B.S., recommended for reappointment for one year.

Medical Officer (Male) in the Venereal Diseases Department (also attached to the Physician in Charge of the Skin Department)

Dr. D. Erskine, M.D., D.P.H., recommended for reappointment for one year.

Medical Officer (Male) in the Venereal Diseases Department (also attached to the Surgeon in Charge of the Genito-Urinary Dept.)—

Mr. A. G. Johnson, L.R.C.P., M.R.C.S., recommended for reappointment for one year.

Medical Officers (Female) in Venereal Diseases Department—

Mrs. D. K. Brown, M.B., B.S., recommended for reappointment for one year.

Miss M. R. Levack, M.B., Ch.B., recommended for reappointment for one year.

Hæmatologist to the Hospital—

Dr. R. L. Waterfield, M.B., B.S., M.R.C.P., recommended for reappointment for one year.

Senior Assistant Bacteriologist—

Mr. E. Sayle, M.B., B.S., recommended for appointment for one year.

Additional Assistant Bacteriologist—

Mr. E. H. Koerner, M.B., B.S., recommended for appointment for one year.

Registrar and Statistician in the Radium Dept.—

Mr. T. H. Hills, L.R.C.P., M.R.C.S., recommended for reappointment for one year.

Chief Clinical Assistant and Registrar, Ear, Nose and Throat Department—

Mr. A. Bowen-Davies, M.B., B.Ch., F.R.C.S., recommended for reappointment for one year.

Chief Clinical Assistant and Registrar, Ophthalmological Department—

Dr. P. M. Moffatt, M.D., D.O.M.S., recommended for reappointment for one year.

Mr. E. P. Tulloh, M.B., B.S., recommended for reappointment for one year.

Chief Clinical Assistant and Registrar, Actinotherapeutic Department—

Mr. S. M. Whitteridge, L.R.C.P., M.R.C.S., recommended for reappointment for one year.

Chief Clinical Assistant and Registrar to Medical Out-Patients—

Mr. M. R. Kark, M.R.C.P., recommended for reappointment for one year.

Chief Clinical Assistant and Registrar in Orthopædic Department—

Mr. J. H. Mayer, M.B., B.S., recommended for appointment for two years.

Chief Clinical Assistant and Registrar, Dermatological Department—

Mr. S. M. Whitteridge, L.R.C.P., M.R.C.S., recommended for reappointment for one year.

Chief Clinical Assistant and Registrar in Neurological Department—

Mr. S. Behrman, M.R.C.P., recommended for reappointment for one year.

Instructor of Patients with Defective Speech—

Mr. H. St. J. Rumsey, M.A., recommended for reappointment for one year.

Dental Officer to Salomons Centre—

Mr. F. A. Walker, L.D.S., recommended for reappointment for one year.

Dental Anæsthetist to Salomons Centre—

Dr. E. H. Rink, B.M., B.Ch., recommended for reappointment for one year.

Sport

Cricket

GUY'S v. HAMPSTEAD C.C.

AN old fixture which has lapsed for some years was revived this season (on Saturday, May 29th), and we were glad to see the Hampstead Cricket Club at Honor Oak Park again.

Guy's won the toss and, batting first, made an indifferent start, Morey and Leeming being out at 17. Foster batted well as he always does, but unfortunately he threw his wicket away, and that was 51 for three. With Birks and O'Gorman in, 60 runs were added in 40 minutes, before the latter was bowled at 113. The middle batsmen collapsed and we were 135 for eight when McLintock joined Birks, and 50 runs were put on in good time. This was a good and very timely stand. We were eventually dismissed for the total of 185.

Hampstead made a disastrous start against the bowling of Coffey and Morey, the latter taking the first four wickets for 13 runs. Five wickets

were down for 24, and the match seemed in our hands, but a stubborn stand for the sixth wicket, aided by some mistakes in the slips, realised 50 runs and only three-quarters of an hour was left.

Three wickets fell quickly to Coffey, who had bowled really well, and a win looked likely. There was some delay while two very gallant veterans defied all our efforts to remove them, but McLintock, coming on for his first bowl, produced two unplayable balls and Hampstead were out for 99.

This was a very good all-round performance; our bowling particularly showed improvement, being not only steady but dangerous.

Scores.—Hampstead, 99 (L. G. Morey, 4 for 27; S. E. Coffey, 3 for 44; C. L. McLintock, 2 for 1).

Guy's

L. G. Morey, c. Boney, b. Jenkins	12
O. G. Lane, b. FitzGerald	17
J. A. Leeming, l.b.w., b. Jenkins	0
H. D. Foster, b. Hunter	21
P. H. Birks, b. FitzGerald	69
G. O'Gorman, b. Jenkins	24
A. C. C. Hughes, b. Jenkins	0
H. A. Thomas, l.b.w. Mackie	1
A. M. Platt, b. Jenkins	4
C. L. T. McLintock, not out	27
S. E. Coffey, b. FitzGerald	0
Extras	10
Total	185

GUY'S v. THE STOICS

AFTER a good and high-scoring game Guy's drew with the Stoics at Honor Oak Park on Monday, June 21st. The Stoics won the toss and, batting first, scored very freely off our opening bowlers.

Andrews and Davies gave a delightful exhibition of late and square cutting, an art which the older generation have mastered so much better than the present. None of our bowlers made any impression on these masterful veterans; in fact, the situation became so serious that at 3 p.m., in spite of audible protest from the vice-captain, the secretary was called upon to bowl. This procedure, as always, introduced an atmosphere of hilarity and an inevitable increase in the scoring rate, the Stoics declaring at 264.

Guy's started badly, losing three wickets for 41, but Foster produced his best form, and his best is very good. He scored 57 in 30 minutes, and was eventually run out with the score at 102 for four.

Birks carried on the good work and, with valuable assistance from McClintock, Sprigings and Platt, the score mounted rapidly, but we never quite got on terms with the clock, stumps being drawn with the score at 251 for eight, Birks carrying his bat for 81.

Scores.—The Stoics, 264 for 6 declared (R. Andrews, 59; T. Davies, 46).

Guy's

J. A. L. Leeming, c. Davies, b. Harrison	9
L. G. Morey, l.b.w., b. Dixon	8
H. D. Foster, run out	57
G. H. G. Chase, b. Harrison	11
P. H. Birks, not out	81
J. M. Warner, c. Davis, b. Gentry	0
C. L. T. McClintock, c. Davies, b. Dixon	21
C. O. R. Evans, st. Andrews, b. Trollope	9
G. C. Sprigings, b. Gentry	20
A. M. Platt, not out	17
S. A. Coffey, did not bat	—
Extras	18
Total for 8 wickets	251

GUY'S v. THE INDIAN GYMKHANA

GUY'S lost to the Gymkhana at Osterley on Monday, July 5th, by five runs, but this was a very creditable performance, for their side included such notable people as the Nawab of Pataudi, Jehankir Khan, Contractor, Klama, the Cambridge Blue, and C. S. Nayudu.

Our opponents batted first, and we did very well to dismiss them for 226, Coffey and O'Gorman each taking three wickets.

Birks and Leeming put on 35 for the first wicket, and Leeming went on to make a splendid

47. O'Gorman and Hughes batted very well, the latter in particular showing good form. Sooner or later, however, we all got out to Nayudu, who we have to admit was just a little too good for us. McClintock lashed the air, and occasionally the ball, to some purpose, but it could not last, and we were all out for 169, which, considering the nature of the opposition, was not at all a bad performance.

Scores.—Indian Gymkhana, 226 (Contractor, 52; D. R. Puri, 46).

Guy's

J. A. L. Leeming, c. and b. Nayudu	47
P. H. Birks, l.b.w., b. Nayudu	11
H. A. Thomas, b. Nayudu	5
L. G. Morey, c. Contractor, b. Nayudu	20
G. O'Gorman, st. Butdt, b. Nayudu	24
H. D. Foster, b. Nayudu	0
A. D. C. Hughes, c. Bucklet, b. Klama	20
T. H. Eustace, c. Tagdale, b. Nayudu	11
A. V. Hurst, c. Nayudu, b. Klama	0
C. L. T. McClintock, b. Klama	15
S. A. Coffey, not out	5
Extras	11
Total	169

SEMI-FINAL REPLAY v. ST. THOMAS'S

AFTER forcing a draw very luckily in our first match, we defeated St. Thomas's in the Semi-Final replay at Honor Oak Park on Monday, July 12th, by 28 runs. This was, perhaps, the greatest game seen at Honor Oak Park for many years.

St. Thomas's won the toss and put us in, and for this temporary lapse from sanity we are greatly indebted to the opposing captain.

Guy's lost Leeming at 1, but with Chase putting away the bad ball in no uncertain fashion and Birks presenting the immaculate straight bat, we made a great recovery, the second wicket falling at 89.

Morey at once settled down and, with Chase, put on 60 more runs when the latter was out for a magnificent 82.

Foster and Morey then carried the score to 186 for three when lunch was taken.

After lunch we did not fare so well, and when Morey and Foster had been dismissed for 59 and 46 respectively, the tail collapsed, and we were all out for 275—a very useful total.

St. Thomas's opened well, and it was not till 43 runs had been scored that Coffey took a great one-handed catch at silly point to dismiss Smith. Colyer had bad luck, and was well run out by Foster just before tea.

After tea, Porter and Tomlinson batted beautifully, and 50 runs were added before McClintock bowled Porter with a great ball. Tomlinson went on batting superbly, and with Dobson added 40 runs. The latter was out at 151, and at 172 Coffey had Tomlinson well caught in the gulley by O'Gorman. Jerry was out at 180, and that was six wickets down.

Guy's looked like getting on top, but Higson and Barnett hit out well, and it was still anyone's match. Morey coming on at 210 pulled out his best and bowled both Higson and Barnett, 226 for eight, but again St. Thomas's hit back, Kinlock and Harker making a great bid for victory. Then in the gathering gloom Hughes brought off a dream catch in the slips, 248 for nine, and two balls later McClintock spreadeagled Cookson's stumps and so, for the first time since 1928, Guy's enter the Final of the Cup.

Scores.—St. Thomas's, 248, H. L. Porter, 40; P. Tomlinson, 63; D. W. Higson, 35).; (C. L. T. McClintock, 4 for 39).

Guy's

J. A. L. Leeming, st. Cookson, b. Kinlock	1
P. H. Birks, l.b.w., b. Dobson	21
G. H. G. Chase, c. Jerry, b. Smitt	82
L. G. Morey, c. Higson, b. Cooper	59
H. D. Foster, c. Tomlinson, b. Kinlock	42
G. O'Gorman, b. Cookson	16
A. D. C. Hughes, b. Cookson	1
H. A. Thomas, c. Tomlinson, b. Cookson	19
A. V. Hurst, b. Cookson	10
C. L. T. McClintock, b. Smitt	4
S. Coffey, not out	0
Extras	20
Total	275

Golf

STAFF *v.* STUDENTS

ON Wednesday, June 30th, the Staff match was played at Huntercombe Golf Club near Oxford.

We were honoured by the presence of Lord Nuffield, who played for the Staff.

The singles, which were played before lunch, ended at five matches all. So the result of the match depended on the foursomes, where the students were completely outplayed and lost every match. Thus the Staff won by 10 matches to 5.

It was agreed by all that the Huntercombe course was in perfect condition, and a most enjoyable day was spent.

Results were as follows :—

SINGLES

Staff		*Students*	
F. A. Knott	0	B. C. M. Reed	1
O. G. Morgan	1	A. L. Yugon	0
Lord Nuffield	0	J. Braithwaite	1
H. Chapple	0	P. Wilson	1
J. Whillis	1	E. S. Foote	0
T. B. Johnston	1	R. Hudson-Evans	0
W. D. Doherty	1	W. M. Philip	0
N. L. Eckhoff	0	K. S. Maclean	1
R. Davies-Colley	0	J. Astbury	1
W. M. Mollison	1	A. K. Borland	0
Total	5	Total	5

FOURSOMES

Staff		*Students*	
L. Bromley and F. A. Knott	1	B. C. M. Reed and P. Wilson	0
H. Chapple and O. G. Morgan	1	A. L. Young and A. K. Borland	0
Lord Nuffield and T. B. Johnston	1	J. Braithwaite and W. M. Philip	0
N. L. Eckhoff and J. Whillis	1	K. S. Maclean and E. S. Foote	0
W. D. Doherty and R. Davies-Colley	1	J. Astbury and R. Hudson-Evans	0
Total	10	Total	5

Lawn Tennis

GUY'S FIRST VI v. PUBLIC SCHOOL OLD BOYS' L.T.A.

GUY'S met the Public School Old Boys' Lawn Tennis Association and won by 5 matches to 4. The results were as follows :—

E. P. O. Watson and K. Chartikavarij—
Beat R. Fosse and Spence, 6—4, 3—6, 6—1.
Beat J. Blackwell and M. Stewart, 7—5, 2—6, 6—4.
Beat J. Philipps and Butler, 6—2, 6—1.

W. Power and W. B. B. Southwell—
Lost to Fosse and Spence, 2—6, 2—6.
Beat Blackwell and Stewart, 2—6, 9—7, 6—3.
Beat Philipps and Butler, 4—6, 8—6, 6—1.

D. Stafford-Clark and Turnvasvin—
Lost to Fosse and Spence, 1—6, 2—6.
Lost to Blackwell and Stewart, 2—6, 3—6.
Lost to Philipps and Butler, 6—2, 2—6, 3—6.

Hospital Information, etc.

Notices

AMENDED NOTICE

Applications are invited for the post of Chief Clinical Assistant and Registrar in the Department for Psychological Medicine, for a period of one year in the first instance as from October 1st, 1937. The Clinical Assistant appointed will be required to devote a large part of his time to psychiatric work with children. Salary, £350 per annum. Whole or part time, in any case not less than seven half-days per week, according to qualifications.

Applications should be lodged with the Superintendent, Guy's Hospital, on or before August 14th, 1937.

GUY'S HOSPITAL DENTAL SCHOOL, OCTOBER, 1937

POST-GRADUATE COURSES

The following have been arranged :—

"Full Denture Prosthesis." By Professor H. B. Fenn, L.D.S., D.D.S. An extended course of six sessions to be held on Mondays at 5.30 p.m., beginning on Monday, October 4th. Entrance fee, £10 10s.

"Inlays, Crowns and Bridges." By W. E. Herbert, L.R.C.P., M.R.C.S., L.D.S. An extended course of six sessions to be held on Tuesdays at 5.30 p.m., beginning on Tuesday, October 5th. Entrance fee, £10 10s.

"Chairside Bacteriology." By A. Bulleid, L.R.C.P., M.R.C.S., L.D.S. An extended course of six sessions to be held on Wednesdays at 6 p.m., beginning on Wednesday, October 6th. Entrance fee, £10 10s.

"Porcelain Inlays and Jacket Crowns." By K. Hooper, L.R.C.P., M.R.C.S., L.D.S. An extended course of six sessions to be held on Thursdays at 5.30 p.m., beginning on Thursday, October 7th. Entrance fee, £10 10s.

"Orthodontics: Diagnosis and Treatment Planning." By F. Bocquet Bull, L.R.C.P., M.R.C.S., L.D.S. An extended course of six sessions to be held on Fridays at 5.30 p.m., beginning on Friday, October 8th. Entrance fee, £10 10s.

"Dental Radiology." By H. M. Worth, L.R.C.P., M.R.C.S., L.D.S., D.M.R.E. An extended course of six sessions to be held on Saturdays at 2 p.m., beginning on Saturday, October 2nd. Entrance fee, £10 10s.

F. BOCQUET BULL,
Dental Sub-Dean.

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L.D.S.

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SPECIAL EXAMINATION, 1937.

Physiology.

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G. C. Kennedy
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SOCIETY OF APOTHECARIES OF LONDON FINAL EXAMINATION

July, 1937.

Surgery.

O. I. Green.

Papers by Guy's Men

C. B. Blacker. Medical causes of infertility: How can they be investigated? *Med. Press and Circ.*, 1937, cxcv, 26.

Martin A. Rushton. A collection of dilated composite odontomes. *Brit. Dent. Jour.*, 1937, lxiii, 65.

C. P. Symonds. Mental disorder following head injury. *Proc. Roy. Soc. Med.*, 1937, xxx, 1081.

A. Simpson-Smith. Chronic sinus of face. *Ibid.*, 1068 (Sect. Study Dis. Childr.).

Louis Forman. Diphtheroid ulceration. *Ibid.*, 1059 (Sect. Dermat.).

Changes of Address

P. J. Doran, c/o Messrs. Grindlay & Co., 54, Parliament Street, W.1.

Appointment

F. J. Napier, M.R.C.S.Eng., D.P.M., Hon. Assistant Physician, Department of Nervous Disorders, Radcliffe Infirmary, Oxford.

Birth

HANRECK.—On July 18th, 1937, at "Oakfield," Horsham, to Kathleen (née Taylor), wife of Samuel Hanreck, L.D.S.(Eng.), of "Chequered Oak," Rowhook, Sussex—a son.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *14th August* 1937 — *Number* 1280

PASSIM

WE need hardly remind you, dear readers, that you have just been living through one of Buchan's cold spells, and if the meat has gone bad in your refrigerator, if two collars a day are not enough to soak up the sweat from your sodden neck, and if a hundred hungry mosquitoes watch your every move in bed, just remember that it is wonderful for those by the sea, for this year, the annual jest of laughing at those fools who go away in early August to freeze in a damp mackintosh has sadly miscarried, and we have been left to gnash our teeth in envy of those who are fortunate enough to be on holiday.

However, while our faith in Mr. Buchan and his ability to prophesy chilly weather has been rudely shaken, and much as we miss those screamingly funny pictures in the daily papers of wide-mesh filters sold as tents, with people trying vainly to smile through a foot of water, it would be a mistake, we think, to lay the whole of the blame upon the unfortunate Buchan, and would point out that that miserable Swithin has not done any too well this year either. It will be remembered that on July 15th, the day set apart to commemorate this somewhat vindictive and moist old man, we were treated to a pretty brisk thunderstorm in the afternoon, and all the wise heads started wagging as the rain came pelting down.

Well, they are still wagging, but, for once, the laugh is with the landladies.

STILL August is always something of an anticlimax, and is mostly given up to idleness of one kind or another, but lately we have had the biggest anticlimax since the Emperor of Abyssinia bolted, and knocked the bottom out of the Italo-Abyssinian war. That long drawn-out and twice-resuscitated farce, known as the Non-Intervention Committee, and registered in this country as the Non-Intervention Company, Limited, has sunk once again into coma, not because Germany and Italy insist on sending more arms and more men to fight for Fascist Spain, although there seems no doubt but that this is going on, but for the good old-fashioned reason that the company is now broke. What the next move will be no one seems to know, but Colonel Cattlefoot's remark that the British Navy should now be used to coerce Japan into accepting Australia has by no means clarified the situation.

INCREDIBLE though it may seem, the football season opens in Scotland to-day, and in England in a fortnight, and within a month now all first-class cricket will be over for another year. But, while Lords and the Oval may be empty, another little season begins on grounds less hallowed and a lot less rolled. September is the month for charity matches, and hundreds of village greens then have a chance to see the great ones play, for it is a custom and a generous habit of many well known professionals to bring to their native towns or villages a side of first-class cricketers, who play against the local side for the sake of charity. On a pitch where local knowledge, brute force and slices of luck are the ruling assets, the village postman and such as Hobbs compete on a comparatively even footing, and with the restraining influence of first innings points, talent money and the decimal place of the average removed for another year, the cricket has a carefree look, and many a cold and correct "wait till the shine's off," number one batsman from Blankshire has astonished his critics and delighted the locals by hitting the ball out of sight on the village green.

All this sounds tremendous fun, but there is a commercial side to it as well, and quite substantial sums of money have been handed over to Cottage Hospitals and similar institutions as the proceeds of these matches, and we feel now that our own Appeal authorities are not unmindful of this way

of raising money, for a charity match on behalf of the Hospital has been arranged, and will take place at the Reigate Priory Cricket Club's ground on Thursday, September 16th.

The contest will be between a team of first-class criketers which, we are told, may include such players as Mr. B. H. Valentine, Mr. T. N. Pearce, Hendren, Durston, Sandham and Nicholls, and a side captained by Lord Ebbisham and composed of students of the Hospital, together possibly with a little strengthening influence from outside.

This ought to prove a great attraction, and it is hoped that it will perhaps do something to advertise our needs in a district which might produce many additional subscribers to the Hospital and to the Appeal, as well as making an attractive afternoon's entertainment for anyone who cares to turn up.

The game starts at half-past eleven, admission is free, except for a nominal charge for the use of the car park, and tickets of invitation to the reserved enclosure may be had on application to the Appeal Secretary, at 9, St. Thomas's Street. Moreover, luncheon and tea may be obtained on the ground, possibly, we are told, to the accompaniment of a real live military band.

Now what could be more attractive than this, and, in the pleasure of our anticipation, we cannot help recalling the remark of a very famous bowler, who, after being hit to all parts of the ground, summed up an equally famous festival match as, " good food, good beer and nought for plenty."

▭

IT was a sad blow to us, and, no doubt, to the nation as a whole, when the late Rector of Stiffkey died recently, and under such regrettable circumstances, though we feel with some conviction that he finished his memorable life in a way that he would have preferred above all others, in that he died among the headlines.

However, there is some consolation to be had in the thought that not all our great natural comedians are dead, and the dull monotony of life was relieved momentarily the other day when we read that a Leicestershire doctor had addressed the local Income Tax officials as follows :—

" The Chief Bloodhound,
Income Tax Racket,
Blackmail and Persecution Dept.,
Granby Street."

To be strictly accurate, the first term of this address was slightly varied, and appeared in a form that was sometimes used by Shakespeare, but for several reasons we prefer what we print above, and, anyway, there is only one letter difference.

This was a novel method of addressing the Inland Revenue Department, and, no doubt, the joke was enjoyed by all, though possibly the doctor was mildly surprised by its expense. For ten pounds is a lot these days, and perhaps, after all, to dash across a few red lights, or commit some other minor breach of the peace, might have been funnier still.

▭

WE wish to congratulate the following on their appointments :—

House Surgeons—

To Mr. Doubleday and Mr. Messenger—
Mr. N. M. Cripps.
To Mr. Pritchard and Mr. Hooper—
Mr. C. W. W. Debenham.
To Mr. Kelsey Fry and Mr. Rushton—
Mr. R. P. Hancock.
To Mr. Bulleid and Mr. Warner—
Mr. A. D. W. Robertson.

Children's Department—

To Mr. Bocquet Bull and Mr. Rix—
Mr. F. McCombie and D. Goodridge.

Assistant House Surgeons—

Mr. Doubleday and Mr. Messenger—
Mr. D. W. Bugg.
To Mr. Pritchard and Mr. Hooper—
Mr. J. B. Hardie.
To Mr. Kelsey Fry and Mr. Rushton—
Mr. P. B. Ellis.
To Mr. Bulleid and Mr. Warner—
Mr. F. D. H. Edmonds.

Children's Department—

To Mr. Bocquet Bull and Mr. Rix—
Mr. P. Myers.

Pulmonary Embolism

A Clinical Lecture delivered at Guy's Hospital in July, 1937, by Dr. A. H. Douthwaite

GENTLEMEN,—In the practice of medicine there are few occasions which provide a more dramatic scene than that of a patient dying of sudden occlusion of the pulmonary artery. At one moment sitting up and chatting, at the next a sudden cry, a few gasps for breath and life is extinct.

PATHOLOGY

The yearly percentage of deaths from pulmonary embolism is taken as a criterion of the efficiency of the hospital pathologist. This attitude of pathologists is, perhaps, a little ungenerous to their surgical colleagues. However, the fact remains that many sudden deaths have been

unexplained in the past is due to the clot in the pulmonary artery having been lost. If the heart is cut away before opening, the odds are that the clot will escape down the drain, or if the heart be cut across near the apex the clot may again slither into oblivion.

In most cases when death is due to embolism a large ante-mortem clot will be revealed riding the bifurcation of the pulmonary artery and extending into both branches. Often distal to the main clot, smaller ones will be found, indicating a previous bombardment which can often be traced in the clinical history. In these massive cases the lungs are dark and œdematous, but show no characteristic changes.

The appearance of lung infarcts produced by smaller clots passing into the minor branches of the pulmonary artery is easily recognised. They lie almost always at the surface of the lung, and are wedge-shaped on section, the base being under the pleura on which fibrin may be deposited. The infarct is dark, almost black in colour, firm to the touch and airless. On section it is seen to consist of red blood cells packed tightly amongst the degenerating alveolar walls.

ÆTIOLOGY

Age.—No age is exempt, especially from post-operative embolism, but, although cases in children under two years have been described, the tendency to embolism rises rapidly after middle-age.

VALVULAR DISEASES

Experimentally it has been shown that the production of pulmonary infarcts by emboli is a difficult matter in the healthy lung, but if congestion of the pulmonary circuit be produced by partial occlusion of its veins, infarction will then readily occur. This, no doubt, explains the frequency with which infarcts of the lung are found in mitral stenosis. It is true that these may be due to thrombosis and thus not concern us to-day, but undoubtedly embolism is often responsible. In such cases the clot is derived from the right auricle. Clotting in the right side of the heart though less common than in the left auricle is nevertheless to be found in many cases of old-standing mitral stenosis.

Pulmonary embolism may also arise in the course of infective endocarditis if the right side is involved, but this is uncommon.

CORONARY THROMBOSIS

The mode of production of a pulmonary embolus in such cases is that an intra-cardiac clot secondary to the infarct of the heart becomes dislodged. It is rare because in most cases the cardiac infarct involves the left ventricle; nevertheless it may arise and complicate an already grave illness. This was well illustrated in a female patient to whom I was called first because of fever due to erythema nodosum and irido-cyclitis, then because of coronary thrombosis, and for a third time for pulmonary embolism. She made a complete recovery, the cause of the illness being a collection of highly septic teeth.

VARICOSE VEINS

The liability of varicose veins to phlebitis explains their danger as a potential source of embolism. In point of fact, it is very uncommon for pulmonary infarction to arise in this way unless the varicosity is very extensive and associated with evidence of incompetence of the deeper vessels. The injection treatment of varices has lead to a few fatalities attributable to pulmonary embolism, but far fewer than those which followed the old method of ligature and excision. Even the injection cases need not have arisen if the original solutions used for this purpose had been relied upon. To the best of my knowledge no death from embolism has followed the use of quinine-urethane or of sodium salicylate solutions. Sodium morrhuate, and still more so glucose, have not been free from fatalities. The explanation is obvious, namely, that solutions which are only mildly irritant will not produce firm adherence of the clot to the vein wall.

INJECTION OF INSOLUBLE DRUGS

The intramuscular injection of suspensions of drugs gives rise from time to time to signs of pulmonary embolism. This is due to the needle penetrating a vein. The chances against this happening are enormous, nevertheless the precaution of exercising traction on the piston before injection should always be employed. In any event, serious consequences rarely follow this type of embolus.

PHLEBITIS

The formation of a friable clot feebly attached to the vein wall and thus a potential source of pulmonary embolus is apt to arise in the femoral vein, especially on the left side or in the external iliac veins during convalescence from certain acute fevers, notably typhoid, pneumonia and influenza. In the majority of such cases, œdema of the corresponding limb arises and is usually permanent; detachment of the clot and fatal embolism must, however, be borne in mind as a possible development. Less often in wasting diseases and in prolonged severe anæmia, the same sequence of events may arise. Carcinoma of the

stomach may happily terminate in sudden death from pulmonary embolism. Some individuals with apparently normal veins and good general health are nevertheless prone to recurrent attacks of phlebitis. On the whole, they are much more likely to have a pulmonary embolus than the sufferers with varicose veins. I believe that focal sepsis is nearly always the basic cause of these attacks, and usually it is to be found at the dental apices or in the maxillary antrum. In a few, gout plays the causative part. A blood uric acid of over 5 mgms. per 100 c.cm. should raise suspicion of gouty phlebitis.

Post-operative phlebitis and the phlebitis of the puerperium form the most important groups, and my subsequent remarks will deal almost exclusively with them. The vast majority of cases of post-operative embolism follow operations in the abdominal cavity. The operations of hysterectomy and appendicectomy head the list, operations on the gall bladder and stomach come next, but even operations for inguinal hernia, or for piles have been followed by death in this way.

SEPSIS

Septic emboli in the course of a septicæmia, or arising from septic areas, especially in the head and neck, are merely a feature of general disease, and, having mentioned them, I shall pass them by as of no immediate interest.

Looking back on this list of causes I have given you, it is clear that the most important from the point of view of mortality due to the embolus and of its possible prevention are the operations of surgery. Why do clotting and embolism so often follow abdominal operations? The answer is twofold: (1) Sepsis; (2) Impeded venous flow.

Spilsbury, in discussing this matter in his Harveian Oration, stated that in the majority of cases of fatal pulmonary embolism examined by him there was no evidence of sepsis, and he concluded that retardation of venous flow induced by the Fowler position and by lack of movement of the lower limbs and abdominal wall were responsible for the train of events. Whilst fully accepting the importance of sluggish venous circulation as a predisposing cause of clotting, I am quite unconvinced by the suggestion that sepsis seldom plays a part. It is a question such as this which emphasizes the limitations of pathological investigation. In the post-mortem room, if no signs of local inflammation are visible to the naked eye, it is assumed that inflammation and infection do not exist at the point observed. This is no justification for disregarding the far more delicate observations of the patient's own body before death. I have never seen a case of post-operative pulmonary embolism where the patient did not show some pyrexial reaction for several days prior to the attack. The typical history is: abdominal operation, post-operative temperature for two or three days, subsidence, but every evening pyrexia of perhaps 99° or 99.6°. In about a week to ten days embolism occurs. The fever is an indication of the existence of infection sufficient to produce clotting, but insufficient to attract the eye of the pathologist. The immobility of a sore abdominal wall, its restriction and that of the diaphragm by the many-tailed bandage, and the kinking of veins by flexion of the hips in the Fowler position are sufficient to explain the preponderance of abdominal over other operations in the production of embolism.

SYMPTOMS AND SIGNS

It is the fat, lethargic patient who bears his post-operative symptoms with Christian fortitude who is the most likely to be rewarded with a pulmonary infarct.

During a peaceful convalescence differing only from the normal by a trivial daily pyrexia the patient's face suddenly assumes the harassed expression of one who is threatened by an ungovernable turbulence of her bowels. In fact, a frantic cry for the bedpan a week or more after an abdominal operation is remarkably often the last volitional effort, preceding death by a matter of a few seconds. When a longer interval elapses between embolism and death, the victim utters a cry and complains of precordial distress in the nature of a sense of oppression. The respiration is rapid and dyspnœa very violent, being in striking contrast to the freedom of air entry into the lungs and the trivial physical signs in the chest. Pallor, restlessness, a cold sweat, an irregular and barely perceptible pulse, turgid veins in the neck, faint heart sounds, staring eyes, or even exophthalmos develop rapidly. Unfortunately, the intelligence is usually preserved and the patient is fully aware of the danger which threatens. Deep cyanosis may follow the initial pallor. Convulsions, delirium or coma may close the scene.

Where the embolus is not massive and passes along the main branch of the pulmonary artery to produce the typical lung infarct the clinical picture differs considerably from the above.

Here again the sense of oppression, dyspnœa and pallor initiate the train of symptoms. The blood pressure falls, the pulse is feeble and rapid, and the temperature may fall. The appearances are, in fact, largely those of shock. Shortly they are followed by severe pleuritic pain in the side, a rise of temperature to about 101°, a moderate

degree of cyanosis, a full, rapid pulse, cough, and again extreme anxiety on the part of the patient.

With yet smaller emboli the symptoms are merely pain, rise of temperature and cough.

It is often stated that signs of consolidation are to be detected over the infarcted area, but this is not the case during the first few days. The physical signs are referable to the usual reaction of the lung to disease, especially when the pleura is involved. In short, there is diminished movement, diminished air entry, and, in consequence, a diminution of resonance on the affected side. Respiratory movement is so limited that a rub can seldom be heard until the pain begins to subside. With return of more normal excursion, a pleural rub and subcrepitant rales may be heard over the diseased area, which is more often on the right than the left side and which favours the lower lobes. In the same district the breath sounds will now be harsh, but seldom tubular in quality.

Scanty, blood-stained, white, frothy sputum appears within 48 hours in about half the cases and persists for two or three days. Within a week of such an attack the symptoms and signs have usually subsided, but if a slight rise of temperature still occurs daily more emboli are likely to follow. I have seen nine such attacks with ultimate recovery following drainage of an appendix abscess.

Occasionally a pleural effusion develops on the infarcted side, and is more liable to do so if there be concomitant heart failure such as often arises after embolism in elderly patients. The fluid is clear yellow, not blood-stained. Pneumonic consolidation or abscess formation are exceedingly uncommon developments about a post-operative infarct, for the virulence of the infecting agent is clearly low.

PROGNOSIS

(Post-operative and puerperal cases)

The following remarks on prognosis are necessarily subject to the proviso that many exceptions to the rule exist. They are based on personal observation rather than on collected statistics, and must, therefore, be accepted with the cautious reserve accorded to relatively small numbers :—

1. In private practice, by the time you have received and attended the urgent summons the patient will either be dead or will probably fully recover.

2. Most deaths from pulmonary embolism occur within the first half-hour ; seldom after two hours.

3. Obvious thrombosis, *e.g.*, swelling and œdema of thigh and leg, is far less likely to be followed by pulmonary embolism than is latent thrombosis, which presumably arises in the pelvic veins and is suggested by pyrexia only. The longest interval which has elapsed between femoral thrombosis and pulmonary embolism has been, in my experience, three months. This is quite exceptional.

4. Where obvious thrombosis is present, if embolism occurs it is seldom fatal, unless the thrombosis is accompanied by a high and persistent rise of temperature. When this is present the clot is heavily infected and a fatality is to be feared.

5. If embolism has occurred the probability of further emboli is considerable.

6. This is heightened by persistence of daily pyrexia.

7. If the first clot does not kill, further emboli are most unlikely to do so.

8. The prognosis so far as the lung is concerned is good.

TREATMENT

1. Of embolectomy I have no experience. From what I have said about prognosis it must be clear that, save in the most exceptional case, such an operation is unjustifiable.

2. Administer morphine. The rapid improvement in colour and pulse which follows this measure is to be attributed to the relief of pain and anxiety. The respiration is thus eased and restlessness abates. Cyanosis due to embolism is, of course, no contraindication to the use of this drug in quarter-grain doses.

3. Continuous oxygen administration by means of the tent or double nasal catheter. In the event of the latter you must insist on a flow of oxygen such that a continuous stream, rather than a few half-hearted bubbles, passes through the water bottle.

4. Strap the affected side of the chest for the first three days. The slight amount of movement of which it is capable is very painful and of no value to the patient. Adequate strapping may abolish pain and thus reduce the necessity for repeated administration of constipating opiates.

The rest of the treatment is that common to all acute medical diseases. I should warn you, however, against such therapeutics as the giving of strychnine, with the idea of increasing the heart's efficiency, or of amyl nitrite to dilate the pulmonary artery and allow the clot to move on ! Fantastic as it may sound, this " push and suck " method has been seriously advised. Neither drug acts as suggested, and amyl nitrite would be dangerous.

PREVENTION

The prevention of embolism rests on the avoidance of phlebitis. Such measures as the obliteration of varicose veins, and the removal of focal

sepsis, or the correction of gout for recurrent phlebitis in ambulant patients are obvious. For the surgical cases the problem is not simple, for the factor of sepsis may be the very condition for which operation is undertaken. Greater attention to dental hygiene in the pre-operative stage is a measure worthy of more consideration than it has received in the past.

Apart from this, we can only control the other influence which aids clotting, namely, retarded venous return. There are few operations which do not allow of massage and still more important movements of the legs and thighs, intermittent relaxation of the Fowler's position, general movement in bed and occasional deep breathing. The very fact that it is the active and troublesome patient who rarely dies of embolism whilst the person sunk lethargically in his bed only too often does do so, is at least suggestive of the value of movement in the prevention of such disasters.

Diathermy in Dentistry

A Paper read before the Dental Society, Guy's Hospital, on Thursday, 18th February, 1937, by G. L. M. Williams, Esq.

MR. PRESIDENT and GENTLEMEN,—I have chosen for the subject of my paper "Diathermy in Dentistry," not because I feel that I am particularly qualified to talk about Diathermy, but because, firstly, it seems to me to be one of a very few subjects of dental interest about which we hear little or nothing at Guy's, and, secondly, because it is a comparatively new subject which is not in the syllabus, and which is all the more interesting for that reason.

I will start by defining a Diathermic Current and attempting to show how it is produced.

A diathermic current is an alternating current whose frequency is so high that it produces no physiological effect on the human body other than a rise in temperature. This means that the apparatus used must be capable of increasing the frequency of the current from the 50 cycles of the electric A.C. main to about 1,000,000 cycles in a modern diathermy machine.

This may be done by employing an oscillating circuit containing a spark gap, a condenser and a coil or inductance.

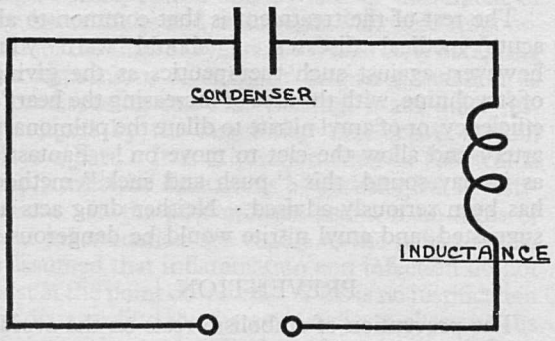
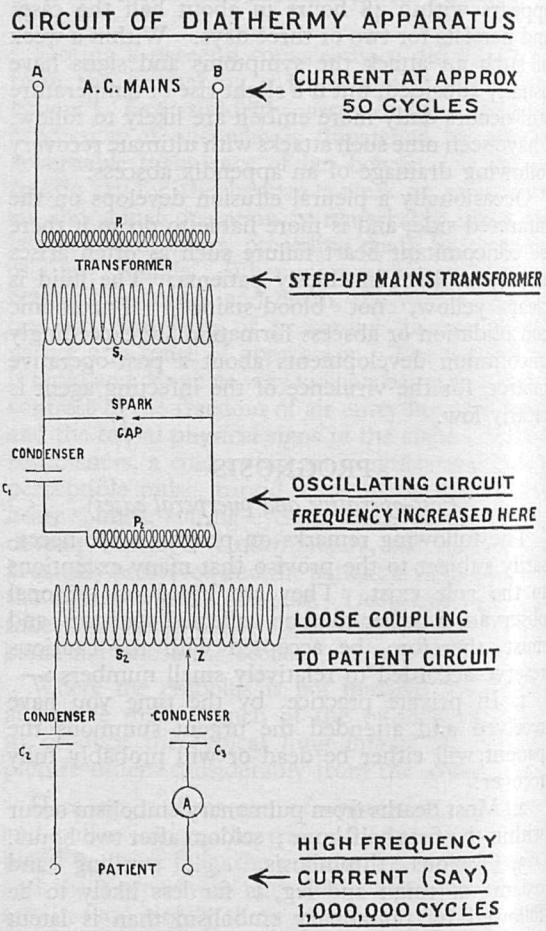


Diagram of Oscillating Circuit

When a current is induced in the circuit the condenser is charged and a spark flashes across the spark gap, during which time an oscillating current



Diathermy Machine Circuit

of very high frequency surges through the circuit, between the plates of the condenser.

The frequency of this current depends on the capacity of the condenser, and the value of the self-inductance of the solenoid. The smaller the capacity and the self-inductance, the shorter will be the time of each oscillation, and the greater, therefore, will be the frequency.

By correct adjustment, a frequency of some millions per second may be obtained in the oscillating circuit, which may be transferred to another circuit called the " patient circuit " in a diathermy machine by means of a transformer.

The voltage of the patient circuit may be varied by altering the number of turns on the windings of the transformer, or by varying the relative position of the primary and secondary, as in the " vario-coupling " coils on a wireless set.

WORKING OF DIATHERMY CIRCUIT

Diathermic currents are subject to Joule's Law, and therefore produce heat in the body when it is used as a conductor. This heat is proportional to the square of the current multiplied by the resistance of the tissue multiplied by the time during which the current flows.

The difference between the action of diathermic currents and direct currents on the body lies in the fact that diathermic currents have only a heating effect, whilst direct currents and low-frequency currents are useless for producing heat, owing to their action on nerve and muscle, causing intolerable pain and contraction long before a useful heating effect is obtained.

Schlyecher explains this by saying that direct currents caused changes in the concentration of salt solutions in the tissues, whilst high-frequency currents of more than 200,000 oscillations per second are capable of heating, but incapable of electrolysis and are therefore painless.

Cumberbatch holds the opinion that the painful effect is due to the direct action of the current on the nerve, and that by making it alternate with high frequency it is deprived of its power to stimulate muscle and nerve. Consequently its strength and density can be increased to a value high enough to generate appreciable heat in that portion of the body included in the circuit, without causing pain or muscular spasm.

Now, in diathermic treatment the current actually traverses the tissue, using it as a conductor, and heat is therefore produced *in* the tissue, which is heated *through and through*.

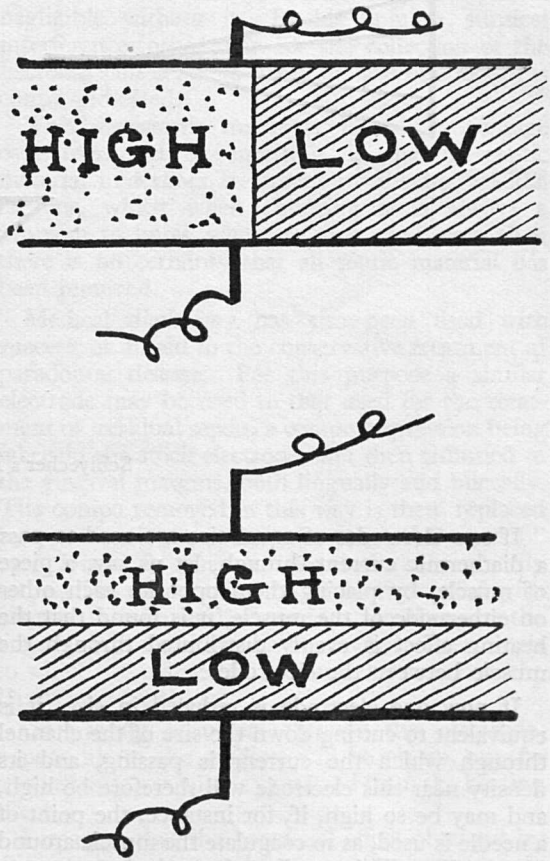
Its property of heating through and through was the origin of its name, diathermy, given it by Nagelschmidt, to differentiate it from other types of heating such as, for example, radiant heat, which simply heats the surface of the tissue, causing a superficial hyperæmia.

It will be seen that when in use for dental purposes the diathermic current will have to pass through a conductor consisting of different tissues. These tissues have widely varying electrical resistances, and the current will therefore have a separate heating effect for each tissue.

If the current has the choice of passing through two different tissues, one of high and the other of low resistance, the greater part of it will pass through that which has the lower resistance, and it will therefore be the tissue of low resistance which will be heated.

If, on the other hand, it *must* pass through from the one tissue to the other, as if the two tissues were in series, it will be the tissue of higher resistance which will be heated.

A knowledge of the approximate relative resistance of different tissues is, therefore, necessary before using diathermy. Cumberbatch states that blood offers the least resistance, the resistance of muscle is about twice as high as blood, that of skin about five times as high, whilst fat has by

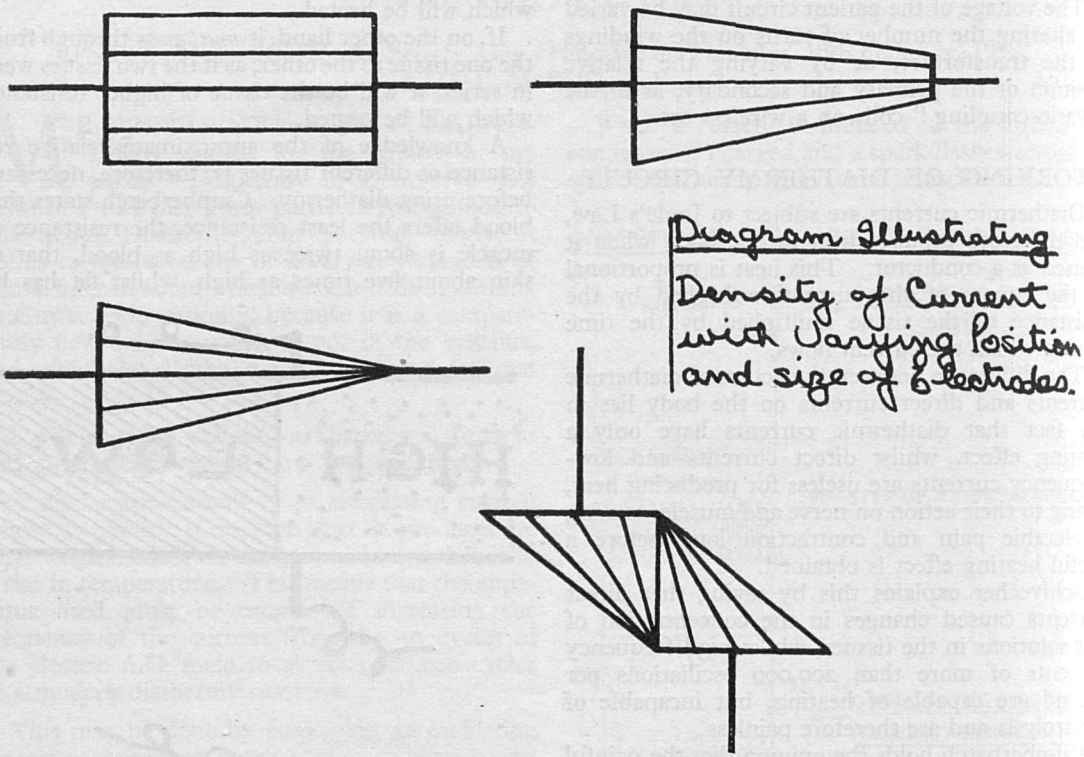


Heating Effect on Tissues in Series and Parallel

far the highest resistance of the soft tissues. Osseous tissue, however, has a greater resistance than any soft tissue—this, of course, applying to both dentine and cementum.

It must be borne in mind that in the living tissues the heat produced by the current is not equivalent to the rise in temperature as hyperæmia soon occurs, and greatly cools the area under treatment by carrying away the heated blood and introducing blood at body temperature.

Another important factor governing the heating of the tissues is the density of the current.



Schlyecher's Density Diagram

If two electrodes of equal size are used to pass a diathermic current through, let us say, a piece of muscle, by placing them opposite each other on either side of the muscle, it is found that the heating effect is evenly distributed through the muscle between the electrodes.

If now one electrode is reduced in size, it is equivalent to cutting down the size of the channel through which the current is passing, and its density near this electrode will therefore be high, and may be so high, if, for instance, the point of a needle is used, as to coagulate the muscle around the needle. This smaller electrode is known as the active electrode, and the larger electrode as the indifferent electrode. Since the indifferent electrode is comparatively large, the density of the current near it will be low, so that it is possible to detect only a very slight increase in temperature around it.

As may be seen from the diagrams, complications also arise in the density of the current if the electrodes are not placed opposite each other.

Diathermy therefore provides us with a means of heating tissues to a degree under the control of the operator, and with accuracy at almost any desired situation.

In general medicine two categories of diathermy are recognised, the first known as medical diathermy and the second as surgical diathermy. Each type is of use in dentistry, and we will first consider the application of medical diathermy to dentistry.

In this type the tissues are heated to only a few degrees over normal body temperature with a therapeutic aim. It is useful for any case where hyperæmia, hyperlymphia and increased metabolism are required.

Laquer and Zeynek recently showed that diathermic currents are bactericidal by injecting living tissue with bacteria, and subjecting the tissue to medical diathermy, when it was found that the bacteria were killed, or at least that their growth was definitely hampered. This is, no doubt, to a great extent due to an artificial fever induced in the region through which the current passes, since temperatures of from 102 degrees F. to 106 degrees F. can easily be reached without discomfort to the patient. In fact, many writers have described the patient's sensation as one of "agreeable warmth." With rise in temperature a hyperæmia is set up, flushing out what might hitherto have been stagnant capillaries, removing toxins, and introducing many of the advantages of acute inflammation into the area under treatment.

The main uses of medical diathermy in dentistry are for post-operative treatment after difficult extractions of infected teeth, and as a means of clearing up residual sepsis, for which it is particularly useful.

As a post-operative treatment after extractions it is useful, since the resultant hyperæmia overcomes the anæmia caused by the adrenalin of a local anæsthetic, the healing being accelerated and after-pain greatly reduced.

Success has also been obtained in the treatment of arthritis of the tempero-mandibular joint, and, to a less degree, in the treatment of trigeminal neuralgia with medical diathermy.

The treatment of a patient for residual sepsis with medical diathermy is as follows :—

First the extent of the sepsis is estimated by means of an X-ray and an electrode made for the mouth which will conduct the diathermic currents to the diseased area.

DIATHERMY ELECTRODE

This electrode may be made of vulcanite tin-lined, but it is better to have one or two stock electrodes and to use "Dentocol" or "Diatol I," which impression materials are electrical conductors.

A good method is to take an ordinary compo impression in the tin-lined stock electrode, as compo is an insulator. The correct portion, that over the site to be treated, should then be cut away, and "Dentocol" or "Diatol I" put in its place and the impression replaced in the mouth, cooled and afterwards trimmed.

This gives a perfect electrode at just the required site and leaves the remainder of the mouth unaffected by the diathermy current. Bowdler-Henry advises a bite-block to be made for the opposite jaw so that the electrode may be held in position firmly between the jaws.

When it is desired to start diathermy, the patient is made comfortable with the electrode in position, and it is ascertained that all contacts are firm.

The diathermy machine is now started and the current increased gradually up to a point where the patient feels an intense, but not disagreeable, heat at the desired site. For a short time the current is maintained at this strength, and then reduced to allow for the accumulated heat in the tissues.

This treatment should last for about twenty minutes after which time the current is switched off and the electrodes removed. The hyperæmia produced by the diathermy current lasts for several hours after the treatment has finished, so that the total effect is considerably greater than would be expected.

It is considered by Bowdler-Henry that the ideal treatment for residual sepsis is diathermy, applied in this manner, together with autogenous vaccine therapy, since the hyperæmia produced by the diathermy greatly assists the beneficial action of the vaccine, which may be almost negligible without it. In his opinion surgical interference, other than for the collection of the bacterial sample, or to break up sclerotic loculi, is contra-indicated.

This diathermic treatment has the advantage over treatment by curetting, in that all septic material undergoes treatment by the bactericidal current, whilst when curetting it is always a problem to know where to stop, and even then there is no certainty that all septic material has been removed.

Medical diathermy has also been used with success, as an aid to the conservative treatment of paradontal disease. For this purpose a similar electrode may be used to that used for the treatment of residual sepsis, a compo impression being taken in the stock electrode, and then trimmed to the gingival margins, both lingually and buccally. The compo removed in this way is then replaced by a conducting impression material, "Dentocol" or "Diatol I," and the electrode subsequently returned to the mouth, pressed home, cooled with a water syringe, and removed. In this case the lingual and buccal linings have separate terminals to which are connected the two electrodes of the Diathermy Machine.

On passing a current through this electrode, hyperæmia of the gingivæ will be set up, but the teeth themselves will be protected from the heating effect.

I imagine that the beneficial effect obtained by this method of treating paradontal disease is

similar to that obtained by the tooth-pick massage of Fish, with the advantage that it is considerably less tedious to the patient; its disadvantages being that it is more expensive and cannot be done by the patient himself in his own home.

SURGICAL DIATHERMY

I would now like to consider the application of so-called "surgical diathermy" to dentistry.

In all uses of surgical diathermy the heat generated at the active electrode is sufficiently intense to coagulate the tissue. This coagulation may be used simply for sterilisation of diseased tissues, or it may be used as a diathermic scalpel for cutting tissue.

ADVANTAGES OF COAGULATION

1. No disturbance of anatomical continuity.
2. Minute vessels are sealed.
3. Infecting organisms are killed.
4. No danger of spread of infection.
5. Operation rarely, if ever, followed by shock.
6. Pain, if present before the operation, is generally relieved.

A diathermy machine, capable of both medical and surgical diathermy, requires two separate circuits, since the currents used differ considerably, that used for medical diathermy being at a higher voltage and lower amperage than that used for surgical diathermy.

Amongst the many uses of the coagulating current in surgical diathermy, authors have described successes in treating apical abscesses, in extirpating the pulp, and in sterilising gangrenous pulp canals.

It is essential before attempting to use this form of diathermy for any of these treatments to experiment with an apparatus on a piece of raw butcher's meat, using a Miller needle as the active electrode, and investigating the effects of different strengths of currents, by noticing how much of the meat has been coagulated around the needle in each case.

In making the experiment the meat is placed on a flat metal plate, and the needle passed through an extracted tooth. The metal plate acts as the passive electrode, being in contact with a large area of the meat.

Dr. Eric W. Kjaer, of Denmark, who has had a great deal of experience in the use of surgical diathermy, always works with a milliamperemeter, using predetermined strengths of current up to a hundred milliamps., with the aid of a local anæsthetic, so that his patients experience no sensation of heat or pain. This, however, would be an extremely dangerous method in inexperienced hands, and most users of surgical diathermy prefer to work without an anæsthetic, and to use the reactions of the patient to the heating effect as a guide to the strength of current. The current is increased until what is known as "a threshold of pain" is reached, and it is not raised above this value. As each patient has a different "threshold of pain," it is not surprising that the results obtained by this method are not always as good as those obtained by Dr. Kjaer.

One of the most interesting uses of surgical diathermy is for the treatment of apical abscesses. Dr. Kjaer has had much experience and success in treating this condition, and his method is, therefore, worth studying.

He first anæsthetises the tissues around the tooth, or, if possible, uses a non-inflammable general anæsthetic such as nitrous oxide and oxygen. Next he applies the rubber dam, opens up the root canal, and disinfects it by passing a 60-milliamp. current through a Kerr broach as the active electrode; this he does six times for five seconds' duration each time, leaving a 15-second interval between each application.

The canal is next cleaned and enlarged without perforation of the apex, and moistened with Ringer's solution. A 40-milliamp. current is then passed for ten seconds, after which he considers the root canal to be sterile.

This still leaves the non-sterile periapical tissues, to which he now gains access with a Kerr broach, gradually increasing the size of the apical foramen until an injection needle will pass through freely. The needle, all but its point, is insulated with chloropercha, and a thread is passed through it to keep it clean. The length of the root is now measured with the assistance of an X-ray, and the needle marked to show how far it is to be inserted to reach the periapical tissue.

The indifferent (larger) electrode is now held against the patient's cheek and a 40-milliamp. current is passed for five seconds. The thread is next removed and the same current is passed for thirty seconds. This causes small bubbles of steam to come from the needle.

Finally the needle is again cleaned, and 100-milliamp. current is passed for two seconds, when the sterilisation is complete.

The root canal is now filled with a paste similar to Parfit's paste and a G.P. point cut to the same diameter as the injection needle.

Before the patient leaves he is warned that some soreness and swelling may occur for a few days after the treatment, and no further work is done on the tooth for a fortnight or so.

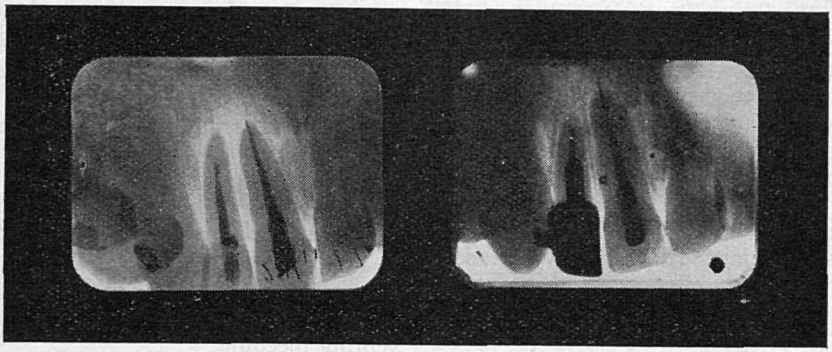
Dr. Kjaer considers that this treatment destroys the bacteria, coagulates the diseased tissue, and creates favourable conditions for the growth of

new tissue. In twelve hundred cases in which he treated different periapical conditions, he states that he had only two cases which required apicectomy after treatment, and in both cases large cysts were present.

A great deal of interest in the treatment of periapical conditions with surgical diathermy has been shown on the Continent.

This treatment was recently investigated by a Dutchman, Schlyecher, whose aim was to find out how far these foci could be sterilised. The work was done at the School of Dentistry in Utrecht University.

He first chose a suitable case for treatment and X-rayed it. Next he opened up the root canal and sterilised the cavity, tooth and surroundings



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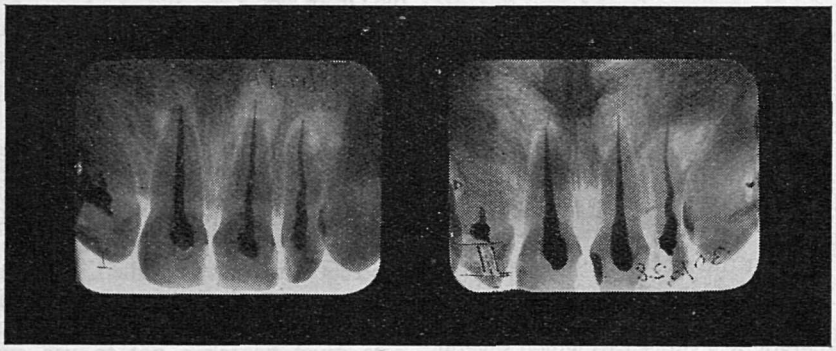

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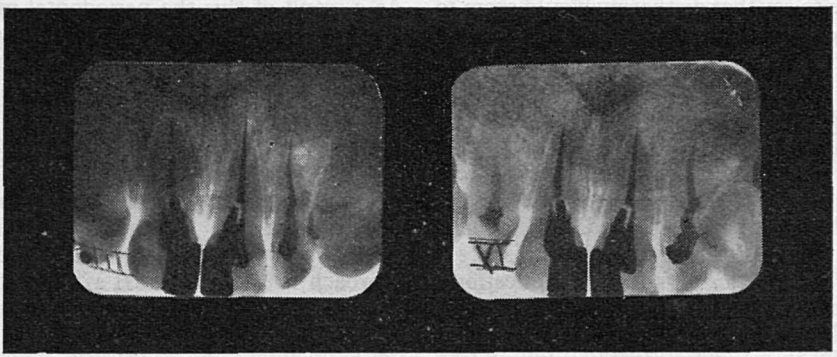

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X-Rays of Two Cases of Apical Osteitis treated by Surgical Diathermy
(By permission of Eric W. Kjaer, D.D.S.)

with tincture of iodine and 33 per cent. hydrogen peroxide, and with the usual precautions examined the contents of the canal, both by direct microscopical examination, and inoculation on different culture media.

He then used surgical diathermy, his method being to increase the current until the patient indicated that the " threshold of pain " had been reached. At this stage he kept the current stationary for three seconds, and then drew the active electrode, in this case a Miller neelde, back along the root canal for three seconds, after which the current was switched off.

His next step was to cover the tooth with sterile wadding, anæsthetise the surrounding tissue, and extract it, placing it immediately into a sterile Petri dish.

The contents of the Petri dish were then examined in a bacteriological laboratory, the tooth being opened and every effort made to prove the presence of live organisms in every situation, both on and in the granuloma, which proved to be present, and in the root canal.

Several different media were used and efforts made to grow the cultures aerobically and anaerobically.

The results of this experiment were remarkable. Before treatment the root canal contents had included gram-positive cocci and diplo cocci, but after treatment by diathermy nothing could be grown on the cultures.

It certainly seems from these results that surgical diathermy *can* sterilise infected periapical tissue, and the contents of the root canal in about ten seconds, even without the perforation of the apex, which Dr. Kjaer advises in his treatment of the condition.

Root-canal therapy is a subject to which several speakers have recently devoted their attention for the benefit of this Society.

I would like to say that diathermy would seem to be a superior form of treatment to any other, including both the usual attempts made at complete removal of the pulp, and partial pulpectomy, upon which we heard such an interesting paper a fortnight ago.

The chief advantage of treating septic root canals with surgical diathermy is that every portion of the pulp canal, including its finest ramifications, can be coagulated and sterilised. I might almost say *especially* its finest ramifications, for Flohr and Flohr have proved that, owing to their small diameters, the ramifications actually receive the maximum of heat. This they did by constructing glass tubes with small branching tubes, which they filled with albumen and placed on a piece of meat.

On passing a diathermic current they found that coagulation always occurred first, at the end of the smallest tube. In this experiment the piece of meat may be taken to represent the main bulk of the pulp, and the small tubes the minute ramifications, with which we are so familiar. I know of no other treatment which will sterilise these ramifications.

Besides being capable of complete sterilisation of the root canal, diathermy overcomes two other common difficulties in the devitalisation of teeth. First, the difficulty of removing the pulp, which is often attached to the wall of the pulp canal so tightly that it is often necessary literally to scrape the wall of the canal to remove it. The second difficulty which it overcomes is the bleeding which so often makes the devitalisation of the tooth a tedious procedure and later causes discolouration.

The diathermic current loosens the pulp from the wall of the root canal, making it easy to remove, and cauterises the stump of the pulp, thus preventing bleeding.

I would like briefly to mention the practical details of removing a pulp by diathermy as done by Dr. Kjaer.

A local anæsthetic is injected and a Miller needle is inserted along the canal as far as the apex, and is used as the active electrode. The inactive electrode is held against the patient's cheek. A current of 60 milliamps. is passed for two seconds and then the needle is withdrawn half the length of the canal and a current of 40 milliamps. is passed for two seconds. On removing the needle the pulp is extirpated, and, if desired, the root canal may be filled immediately.

When using diathermy in this way it is necessary to realise that its effect is entirely one of heat, and care must be taken not to use currents which are too strong or to use them for too long a time, as the effect would go further than is desirable. As a result of this the periodontal membrane and the bone of the socket might be coagulated, and this be followed by sloughing and the subsequent loss of the tooth.

Bowdler-Henry has made use of this phenomenon in the case of a hæmophiliac for whom it was necessary to extract a septic incisor tooth.

First he removed the crown of the tooth, anæsthetised the surrounding tissue, and deliberately heated the tooth with diathermy, using a broach in the root canal as the active electrode. When a white ring appeared around the gingival margin the current was stopped. The extraction of the root was now a bloodless operation, since the whole of the socket was coagulated. In time a sequestrum representing the bone which had been in direct contact with the root was exfoliated,

and the socket then healed satisfactorily.

Before referring briefly to the use of diathermic currents as a means of cutting tissue, there is one more use of the coagulating current which is of particular dental interest. This is for the bleaching of dead and discoloured teeth, a task which has always proved difficult and the result not always satisfactory. In this case diathermy is used as a means of heating of the bleaching agent, usually hydrogen peroxide, and this is said to improve its bleaching action considerably.

A rubber dam is applied to the tooth, and the root canal having been sterilised and filled, the cavity is very carefully cleaned and a pledget of cotton wool steeped in strong hydrogen peroxide is inserted in it. A similar pledget of wool is placed in such a position on the opposite aspect of the tooth, that the area to be bleached lies between the two pledgets, which are now joined by a bridge of cotton wool. One small electrode is now placed on the pledget of wool in the cavity and the other on the opposite pledget. By switching on a moderate current for a few seconds several times in rapid succession, the hydrogen peroxide is heated and decomposed.

A German firm, which makes a dental bleaching outfit, claims that ozone is formed, which has a thorough and enduring bleaching effect on the tooth, generally after only one application.

We now come to the use of diathermy as a means of cutting tissue. Its use is restricted in dentistry for several reasons, and I shall therefore not spend long describing it.

In the first place, a machine utilising a thermionic valve instead of a spark gap is necessary, since the type of current required, one of sustained oscillation, *low* voltage and *high* current, is best obtained with a valve.

The cutting action of the current is due to the intense localised heating of the tissue by the electric arc which is formed. In addition, the arc coagulates the cut surfaces to a slight depth and seals the small blood vessels and lymphatics. For this reason the cut is bloodless and sterile, and it is also less painful afterwards than a scalpel incision owing to the capping of the nerve endings.

It is again advisable to experiment on a piece of meat before using the cutting current in the mouth. The active electrode is a fine needle mounted in an insulated handle. The inactive electrode is again a metal plate on which the meat is placed. Maximum current is used and the point of the needle is brought gradually towards the meat. Just before contact is made an arc appears. The needle is inserted into the meat and can be drawn through the tissue whilst both cutting and coagulating. During this time the needle is not in actual contact with the meat, but is separated from it by the electric arc, which actually does the cutting, the needle merely acting as a guide to the arc.

I have said that the application of the cutting current to dental operations is limited, and one of the chief reasons for this is that the soft tissues in the mouth are so close to the osseous tissue that it is impossible to avoid contact with bone at some time, this being followed by necrosis of the bone.

The cutting current has been used in dentistry for the excision of pyorrhœa pockets, and for the removal of gum flaps over third molar teeth, though it appears to be the least useful form of diathermy in dentistry.

In this paper I have mentioned only the results that have been obtained with ordinary diathermy currents of frequencies between 300,000 and 500,000 oscillations per second, but recently what are known as "ultra short-wave currents," with a frequency of from fifty million to a hundred million oscillations per second, have been used in general medicine with great success. It has been found that these currents do not respond to Ohm's Law, and will pass through all tissues of varying resistances in a direct line.

Another advantage of these ultra short-wave currents is that they may be directed more accurately to a particular point, than the ordinary diathermic type of lower frequency.

To sum up: It would seem that, as at present used, diathermy *has* a place in dentistry especially for the treatment of periapical conditions and residual sepsis, but that in the near future it will be superseded by the ultra short-wave therapy because of its superior accuracy and more certain results.

Correspondence

The Trees in the Park

To the Editor of the GAZETTE

SIR,—I would venture to draw your attention to the last paragraph in the very interesting "Passim" which you produced in your last issue.

You state that "Natural modesty prevented you from attending in the capacity of a reporter." Should not "in" be "with"? Mr. Eason knows and has told us that the planes in the Park are not very old, but when did the "immemorial elms" which, you indicate, sheltered Lord Nuffield and the Matron come to us at Guy's

Hospital? Even under the influence of a garden party, and in front of your empty firegrate, surely the major influence of him who is reported to be shortly appointed to a post for which no one is better qualified, namely Mr. Evans, might have led you in the absence of more exact botanical knowledge to have designated the trees as sycamores, or foreign maples—but elms! My dear sirs!

I recollect once being mistaken for a hornbeam, by a botanist who had specialised in leaves, but to be mistaken for a plane makes all my timbers shiver.

I have sent a representative down from Harley Street who went on a bus, but charged on a Rolls-Royce basis, and he informs me that the trees in the Park at Guy's are, as they were, planes.

Yours, etc.,

"ULMUS CAMPESTRIS."

"Somnol-Oxygen"

To the Editor of the GAZETTE

SIR,—"What's in a name? Call a rose . . .", etc. I submit that in this instance the Immortal Bard is wrong.

A laboratory name has its right use for the physician, dental surgeon, or other person with a scientific training, but the scientific term surely should not be used *to* the public. A semi-scientific or commercial name should be employed instead.

How thoroughly the commercialised names of "lysol" and "aspirin" have appealed to the general public.

Now what name do we use to our patients for nitrous-oxide gas?

The word *gas*, by its name alone, has a fearful and sinister sound to the uninitiated, more especially since the War.

I suggest the name *Somnol-Oxygen* be introduced to the general public by physicians, dental surgeons, and anæsthetists, instead of "gas."

I appeal more to teachers and lecturers of medical and dental schools, and members of hospital staffs, to instil such a modern term for "gas" into the minds of their students.

This will take time, but it can be done, and I would quote as a precedent the term "denture," which patients have learned (at long last) to say instead of the very unpleasant names of "artificial plates" and "false teeth."

When discussing anæsthetics with patients, the psychological aspect is an all-important one. The public is familiar with oxygen, and knows that it is a pleasant, life-preserving gas. Let them know that *Somnol-Oxygen* is a gas that sends them into a safe and pleasant *sleep*.

Yours, etc.,

NORMAN S. HEEGAARD WARNER.

Kingsnorth,
Lamorbey,
Sidcup, Kent.

(We feel that the term "gas" has been in general use so long that it would take at least a hundred years to replace is by "somnol-oxygen," which, as it does not mean anything, and, in its turn, would doubtless soon be abbreviated, possibly to "sox," seems to us a doubtful advantage. We regret that we spoke of "false teeth" but yesterday.—*Ed.*)

Minor Maladies and their Treatment

To the Editor of the GAZETTE

SIR,—In the current number of the *Gazette* (it is as good as ever, I notice) there is mention of a very eminent Guy's man whose name I need not repeat.

The last time I had the privilege of meeting him at an operation, as he washed his hands he said: "Gibson, do you take liquid paraffin?" I replied: "No, I have no need to." He went on: "You ought to, everyone ought to. I have taken it myself three times a day for 20 years."

Yours, etc.,

J. H. GIBSON.

The White House,
Aldershot.

Sport

Cricket

THE FINAL CUP MATCH

ST. MARY'S beat Guy's in the Final of the Cricket Cup at Chiswick Park on July 21st and 22nd by three wickets. The better side won, there is no possible doubt of that; man for man they were just too good all through, but Guy's even when there seemed no hope left kept the game very much alive, and may take credit from the narrow margin of the defeat.

Winning the toss and batting first we collected the modest total of 202, of which Leeming, in spite of a damaged hand, scored a very good 74. Morey also batted well, but the remainder of the side was disappointing, particularly as both

Hughes and Foster got out when they looked well set. At the close of our innings it rained hard for two hours, and play was not possible again till after 6 p.m.

With a wet ball our bowling looked harmless, and Macrae and Schneerson put on 116 for the first wicket. Macrae was badly dropped in the slips quite early on and this proved expensive, for on Thursday morning he went on to make a very good hundred. Morrison got 50 in no time at all, and the score was 206 for three when he was out. Wickets fell steadily after that, and St. Mary's were all out for 335 leading us by 123 runs.

Guy's opened their second innings steadily and had 60 on the board for two wickets, but then Morrison did the hat trick and with the score at 71 for six we looked well beaten. From this depth of despair, Hughes rose magnificently, and, producing the form we have so long known him capable of, scored an invaluable 70.

Thomas, using his dazzling hook, scored 24, and Hurst, a courageous 35, while McLintock gathered 20. That made the total 225, and we were 93 on. Not a big lead, but, encouraged by the anecdotes of an old Guy's man who remembered dismissing King's for three, we took the field not at all despondent. There, though it must be confessed we never really looked like winning, we did make things decidedly uncomfortable for St. Mary's.

Schneerson was out at 13, Macrae scored 25 and was out at 37. Morrison and Muller were both out at 62, but Wynne Wilson and Owen Smith made things almost safe, the former, however, was out at 84 and Morey bowled Keigwin at 90.

Before the end, Owen Smith gave Birks his fifth catch of the match at mid-wicket—a monster that he might just as well have dropped, but he did not, and it was left to Cockburn to score the winning hit.

Thomas kept wicket very well indeed throughout the match, only three byes being let through in 420 runs.

This was a good end to a most enjoyable season.

Guy's

(First Innings)

J. A. L. Leeming, c. Taylor, b. Owen Smith	74
P. H. Birks, c. Wynne Wilson, b. Mendlesohn	9
G. H. G. Chase, c. and b. Mendlesohn	2
L. G. Morey, c. and b. Owen Smith	34
G. O'Gorman, b. Owen Smith	1
H. D. Foster, b. Taylor	17
A. C. C. Hughes, run out	12
H. A. Thomas, c. Taylor, b. Mendlesohn	10
A. V. Hurst, b. Mendlesohn	5
C. L. T. McLintock, st. Muller, b. Mendlesohn	5
S. A. Coffey, not out	9
Extras	24
Total	202

(Second Innings)

J. A. L. Leeming, c. Morrison, b. Taylor	9
P. H. Birks, c. Taylor, b. Owen Smith	0
G. H. G. Chase, b. Morrison	34
L. G. Morey, b. Morrison	0
G. O'Gorman, c. Schneerson, b. Owen Smith	4
H. D. Foster, c. Schneerson, b. Morrison	18
A. C. C. Hughes, c. Schneerson, b. Owen Smith	70
H. A. Thomas, st. Muller, b. Owen-Smith	24
A. V. Hurst, c. Wynne Wilson, b. Owen Smith	35
C. L. T. McLintock, not out	20
S. A. Coffey, b. Owen Smith	5
Extras	6
Total	225

St. Mary's

(First Innings)

G. Schneerson, c. Morey, b. Foster	67
F. M. Macrae, c. Hughes, b. Coffey	108
G. F. Muller, c. Leeming, b. Morey	8
R. W. M. Morrison, c. Birks, b. McLintock	50
H. G. Owen Smith, c. O'Gorman, b. Coffey	12
W. Wynne Wilson, c. Thomas, b. Coffey	5
H. J. Keigwin, c. McLintock, b. Coffey	20
H. G. Percy, c. Foster, b. O'Gorman	25
H. D. Cockburn, c. and b. McLintock	9
T. Mendlesohn, c. Birks, b. Morey	15
P. H. Taylor, not out	0
Extras	8
Total	335

(Second Innings)

G. Schneerson, c. Chase, b. Morey	6
F. M. Macrae, st. Thomas, b. Morey	25
G. F. Muller, c. Thomas, b. McLintock	20
R. W. M. Morrison, c. Birks, b. McLintock	2
H. G. Owen Smith, c. Birks, b. McLintock	14
W. Wynne Wilson, c. Birks, b. McLintock	16
H. J. Keigwin, b. Morey	4
H. G. Percy, not out	1
H. D. Cockburn, not out	4
Extras	4
Total for 7 wickets	96

T. Mendlesohn and P. H. Taylor did not bat.

Hospital Information, etc.

Notices

GUY'S HOSPITAL DENTAL SCHOOL

POST-GRADUATE COURSES

The dates given for these courses in the last issue of the *Gazette* have been altered as follows :—

Orthodontics.—Beginning on Friday, November 5th, instead of October 8th.

Chairside Bacteriology.—Beginning on Wednesday, November 3rd, instead of October 6th.

Full Denture Prosthesis.—Beginning on Monday, November 1st, instead of October 4th.

Inlays, Crowns and Bridges.—Beginning on Tuesday, November 2nd, instead of October 5th.

Porcelain Inlays and Jacket Crowns.—Beginning on Thursday, November 4th, instead of October 7th.

Dental Radiology.—Beginning on Saturday, October 30th, instead of October 2nd.

Applications should be forwarded to the Dean not later than September 30th, 1937.

Pass List

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

L.D.S.

SECOND EXAMINATION.

July, 1937.

Medicine, General Pathology and Bacteriology.

O. B. Balean
C. N. Blockley
W. H. Bransom
E. P. Cutler
F. J. Edgell
F. J. H. Edmonds
K. P. Liddelow
M. Malleson
P. S. Marshall
A. Middleton
L. J. Moir
R. D. Ogston
L. A. Quick
A. J. Rogers
D. D. Stalford
J. Symmons
F. G. Triay

CONJOINT BOARD.

L.R.C.P., M.R.C.S.

FINAL EXAMINATION.

July, 1937.

Pathology.

R. D. Blachford
W. E. W. Bridger
R. V. Coxon
J. J. Davis
A. M. Edwards
P. G. Epps
F. E. Falconer
J. B. Franklin
S. Green
A. M. Hutton
M. A. Imray
I. J. Mathias
A. H. Mayne
O. Meerapfel
W. F. Mindham
J. P. J. O'Keefe
K. R. D. Porter
A. T. M. Roberts
R. Rhydwen
H. D. Smith
I. G. B. Drybrough-Smith
C. J. Stewart
N. G. Straschun
A. W. Taylor
D. J. Wigginton

Medicine.

*O. B. Alikija
*I. Singh
*L. B. Blomfield
V. H. Bowles
C. N. Brown
*N. J. Burnand
S. S. Davidson
*R. C. Jackson
*D. H. Mackay
*J. R. Miles
*C. N. Mills
*W. B. Parker
*D. G. Price
*W. G. Tillmann
*J. A. F. Tobin
*F. Walt

Midwifery.

R. D. Blachford
*L. B. Blomfield
W. E. W. Bridger
J. D. Buckner
L. H. Cooper
R. V. Coxon
A. W. G. Croft
T. T. Davies
J. J. Davis
P. G. Epps
W. Fine
*D. L. V. Fraser
P. F. B. Gillett
G. N. L. Godber
S. Green
A. M. Hutton
M. A. Imray
H. M. R. Knight
A. S. Lees
F. J. C. Matthews
L. E. Milton
O. Murapfel
J. P. J. O'Keefe
C. Phillips
K. R. D. Porter
R. F. Pusey
R. Rhydwen
A. T. M. Roberts
*W. R. Russell
F. M. Smith
H. D. Smith
N. G. Straschun
A. W. Taylor
D. J. Wigginton
P. Wilson

Surgery.

A. K. Borland
A. Crook
*A. G. Dabbs
D. I. Evans
S. D. Hankey
*R. C. Jackson
H. M. R. Knight
*O. P. Llewellyn
*J. R. Miles
J. Patterson
F. J. R. Stoneham
*C. R. Tilley
*J. A. H. Tobin
*F. Walt

*Have now completed the Examination.

Changes of Address

H. J. W. Westlake, The Cedars, Victoria Road, Deal. *Deal* 78.

J. B. Spearman, Poona, Victoria Road, Gillingham, Dorset.

C. Hewitt Atkinson, 53, Green Street, Park Lane, W.1. *Mayfair* 6080 and 2444.

Appointment

D. P. King, M.B., B.Ch., Assistant Pathologist at St. Thomas's Hospital.

Births

KING.—On July 17th, 1937, at Nuffield House, to Pamela, wife of Donald King—a son.

NORTHFIELD.—On June 25th, 1937, at 20, Devonshire Place, to the wife of D. W. C. Northfield, M.S., F.R.C.S.—a daughter.

LEWIS.—On July 7th, 1937, to Molly, wife of Windsor Lewis, M.B.—a daughter.

Marriage

IRELAND—BROMLEY.—At St. Wilfred's, Egginton, Derbyshire, Thurston Ireland to Ethel Maud, youngest daughter of Mr. and Mrs. William Bromley.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

FIRST as ever with the news, we would make a formal announcement that Professor T. B. Johnston has accepted the invitation of the Governors to succeed Mr. Eason as Superintendent of the Hospital, and will take over this onerous job early in October from Dr. Conybeare, who has kindly presided during what would certainly be described in a history book as the interregnum.

No doubt our well-informed readers will afford us a pitying smile and, after assuring themselves that this is not, after all, one of the June numbers, will assume that we have just returned from our annual three months' holiday of idle luxury, and are just beginning to become aware of the changes in our midst, but alas we have yet to visit the sun-scorched shores of Southend, and have simmered here with the rest meanwhile, listening intently to every rumour regarding the possible candidates to the post left vacant by Mr. Eason, and indulging in that most fascinating of all pastimes in attempting to spot the winner.

Thus it was that we came to hear of the Governors' invitation to Professor Johnston not very long after you did, most patient readers, but it is only comparatively recently that the University of London have ratified the alteration of his anatomical duties from a whole-time Professorship to a half-time one, an adjustment which, in the circumstances, was essential before Professor Johnston could be announced formally as the new Superintendent.

However, we feel sure that all our readers, whether they have been certain of this appointment for weeks, or whether it is news to them, whether they work within these walls, or whether they have long since left us, will join with us in a heartfelt sigh of thankfulness that such an admirable successor has been found to this most important position, and we feel we can but echo Mr. Eason's words, when he addressed the Nursing and Administrative Staffs at a recent presentation :—

" I can say no more, except to say how relieved I am to know that the Dean is going to succeed me. In him I am sure you will find one who will carry on the great traditions and the comradeship of the administrative staff."

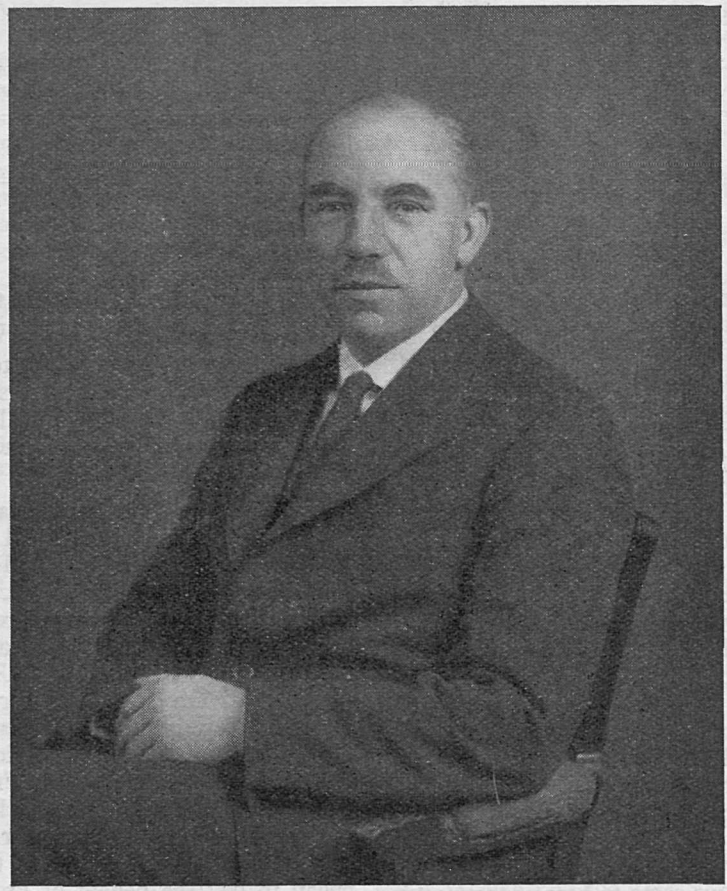
Professor Johnston was educated in Edinburgh, where, in 1906, he graduated with First Class Honours in both Medicine and Surgery, and was soon afterwards appointed Lecturer in Anatomy at the University, where he remained until the early part of 1914, when he came to London as Lecturer in Anatomy at University College Hospital. Here he was also for a time Sub-Dean of the Faculty of Medical Sciences. During the Great War he saw active service with the Royal Army Medical Corps, both in France and in Italy, and was Mentioned in Dispatches in May, 1918, but, as far as Guy's was concerned, it was in the period immediately following the War that we began to feel the benefit of Professor Johnston's wisdom and forceful personality, for, having held the Chair of Anatomy since the preceding year, he was, in 1920, appointed Dean of the Medical and Dental Schools, and to him fell the most difficult task of reorganising both these schools after the disruptive influence of four years of war.

How well this task was accomplished may be gathered easily from the healthy and prosperous state of both Schools to-day, and when it is realised that most of the teaching departments of the Medical School have been almost entirely rebuilt, that a very large extension has been added to the Dental School, and that within a few months we shall have one of the finest Pathological Blocks in the country, some idea will be gained of the immense debt of gratitude that the Hospital owes to Professor Johnston for the invaluable work he

has done during the years when he has been responsible for the teaching schools.

During these years also Professor Johnston has found time to edit *Gray's Anatomy*, has written a book on regional anatomy which must have helped numberless students besides ourselves, and has held many distinguished appointments in the field of Anatomy, among which we may mention that he represented the Anatomical Society of Great Britain and Ireland, of which he is Vice-President, at the International Anatomical Congress in Milan in 1936, and has acted as British representative on the Internaitonal Anatomical Nomenclature Commission.

Thus it is that his appointment as Superintendent is but a further step in a very distinguished career, and, with very great respect, we would add our congratulations to Professor Johnston to those of our readers, resting assured that the Hospital as a whole will now profit from the wise counsel, unfailing energy and enthusiasm which has carried the School through so many critical years.



Professor T. B. Johnston, M.B., Ch.B.

As everyone but a deaf man must know, the building of the new Pathology Block has been progressing very rapidly—how rapidly we did not appreciate until one day last week we made the tour of its seven stories.

The shell is complete, the partition walls are up, and everywhere workmen are busy laying mosaics and installing a complicated network of electrical and other fittings, and since we have not, as yet, given any details of the new building, we think the moment opportune for so doing.

The objects of its erection are threefold. Firstly, to provide adequate accommodation for the departments of Pathology and Bacteriology, which have hitherto been housed in the most miserable surroundings. Secondly, to give additional space to the Physics and Biology Depart-

ments, while the third object, though less concrete but in many ways the most important of the three, is to provide a physical and mental *rapprochement* between the various scientific sections which constitute the Medical School.

The cost of the scheme is £80,000, and this has been met in the following manner: The Medical School has provided some £30,000, which has been diligently saved for this purpose, and the University of London has made a grant of £10,000. This leaves a deficit of £40,000, which will be raised partly by a loan and partly by an anticipated Medical School surplus during the next ten years.* The number of students to be admitted to Guy's annually will remain at the present figure for some years to come. It will certainly not be raised, and it is hoped little by little to reduce it.

That there are too many medical students here no one can deny, but it must be realised that a reduction in their number is an expensive luxury. Let those who may have suffered from the overcrowding of recent years console themselves with the thought that they have in a large part made possible the erection of this fine new block.

The actual building is of steel and brick construction, and the heating is of the ceiling panel type as used in Nuffield House.

On the " lower ground floor " (basement, to us) are a medium-sized combined Physics and Biology Theatre and a large Pathology Demonstration Theatre. The ground floor houses an entirely new Physics Department, the old Physics Laboratory having been redesigned as an Operative Surgery room. On the first floor is a large general students' Pathological Laboratory. Here, too, are rooms set aside for patients who come for investigation. The second floor will contain the Bacteriological Department and the Staff Common Room, which will have attached a small kitchen from where it is hoped to serve cold meals and teas. The third, fourth and fifth floors contain respectively the Clinical Chemistry and Pharmacology Departments (third), the Pathological Department (fourth), and Drs. Osman and Grant's Research Laboratories (fifth). Here there is what we believe to be an innovation for the Hospital—an operating theatre for the animals, complete with a preparation and recovery room. Above this on the top floor are their quarters, which provide for segregation of infected animals. From the roof can be seen a magnificent panorama of London, including the finest possible view of St. Paul's. Since the building adjoins the present Medical School it has been found possible to enlarge both the dissecting room and the Biological Laboratory into the new building. The approaches and entrances are not impressive. The front one consists merely of a corridor leading through the present School; the rear one of a descending ramp to the basement. At the back is an open space which will be used for a car park and perhaps (dare we mention it?) for housing some new squash courts.

It will be seen from this short description, which is, we fear, far from complete, that we are in the process of acquiring what should be one of the finest Research Units and Medical Schools in the country.

One thought in particular occurred to us while on our tour. We fervently pray, amid the rival claims of lighting, heating and plumbing, that the matter of ventilation will not be overlooked, for the present Anatomy Theatre, complete with renovated seats and lighting, possesses at the end of three consecutive lectures the most malodorous atmosphere in London.

It is hoped that the new block will be opened next May mid clamorous rejoicings. If it proves the success we anticipate it will, we shall be indebted to the Dean and Professor Wright, who have taken vast pains over every detail of its layout and nursed the project since its inception.

* These figures are approximate.

▭

IT is comparatively rare nowadays to meet a non-smoker; the vice is all but universal, and has attained the distinction, if one may believe the advertisements, of having become transmuted into a virtue, for does it not soothe the nerves, aid the appetite, and effectively remove the very semblance of a cough? However, we would hazard the opinion that it is almost equally uncommon, oddly enough, to encounter a smoker who has not on one occasion or another attempted to disembarrass himself of this virtue—and what an effort it is! He struggles manfully and with some success until the number if reduced to four a day—a cigarette after each meal, but there he sticks, for " the native hue of resolution is sicklied o'er with the pale cast of thought," and a hundred devices occur to his mind to prevent him seizing the victory which lies within his grasp. We speak with some authority when we say that, without a doubt, the after-lunch one will prove the most difficult hurdle which the tobacco-renouncing neophyte will encounter, for, added to his own indecision, he will have to face the cajoling wiles of his lilier-livered companions, ever anxious to help a good man on the downward path.

These somewhat fruity reflections came to us the other day following a chance meeting with a patient in a surgical ward. We collided when he was entering from some unmarked door, and on his face was a look of heavenly entrancement,

which bespoke no interest in the material world, and behind his ear was the remains of the source of his contentment—a state of mind which was not shared by his more unfortunate fellows who were confined to their beds.

We talked long about this matter, and the patient stated his case succinctly and logically. No, he couldn't complain, two hours a day was very reasonable, and he quite saw the ward could not be turned into a "blooming opium den," and indeed he supposed the fire insurance people were pretty strict, but why, in the name of Heaven, he inquired, should the allotted hours be so badly apportioned? Not even the most inveterate smoker would wish to indulge himself for an hour at 6.30 in the morning, and, having done so, he must then forego his after-lunch and after-tea smokes until he is again able to satiate his appetite for an hour at 5.30.

How much more pleasant it would be, he said, if a half-hour's indulgence were allowed after each of the four meals, and, thought we, how much better for the gastric mucosa.

Still, we provided the required consolation by turning his thoughts to the lot of the more unfortunate female patients across the way, who lay entirely bereft of nicotine, and at this his face brightened and he suggested with a wink that perhaps, as a compensation, they might be allowed an extra half-hour's hymn-singing.

THE Epstein statues are coming down, it seems, and the volume of arguments pro and con demolition which has been filling the dailies of recent weeks has proved of no avail to alter the decision. It is certainly a nice point—on one hand there are those who claim that the cause of art will suffer by removal of the statuary (and it appears all are agreed that it would prove impossible to reassemble the figures elsewhere for technical reasons); on the other are those who maintain with equal vigour that an Epstein in the dustbin is better than the dreaded alternative—a possible hailstorm of Epstein arms and legs on the passers-by. To complicate the issue still further, the merits and demerits of Epstein as a sculptor are being hotly debated, and artists in Chelsea and colonels in their club armchairs are becoming very hot and bothered about the whole matter.

Now we will not burden our readers with our theories of Art, although this would not take long, but we really must register a most energetic protest against a local exhibition of vandalism which has recently taken place in our midst, namely, the destruction of one of the panels in the Externs' Room on the night of the Residents' Going-off Dinner. Things are coming to a pretty pass when this historic collection of perhaps simple but essentially British products should be desecrated under our very eyes, and the vandals go unpunished. What the motive can have been we cannot imagine, but it was whispered to us that this fine piece of British oak had been decorated in a manner which suggested an exotic influence foreign to the rugged and homely panels around it.

If this was the case, it throws an entirely different light on the matter, and the destroyers could be congratulated on their effort to keep the purity of our native art untainted. Hitler has recently shown us how to preserve the national *culture intact*, and perhaps these gentlemen are only applying these fine principles here at Guy's.

Nevertheless, failing this explanation, we must insist that steps be taken in future to safeguard this valuable collection and we would suggest that on the occasions of the above-mentioned dinners it would be well to remove each and every panel to some subterranean vault where they could be suitably protected by sandbags.

Medical Aspects of Life Assurance Examinations

By J. J. Conybeare, Esq., D.M.

ALTHOUGH most practitioners are called on, from time to time, to carry out life assurance examinations, I doubt whether many of them realise that before a proposal for life assurance is finally accepted their medical report has to pass through many hands. In the first place, when it is received at the head office of the life assurance company it is scrutinised by one of the clerks in the new business department. He usually underlines any points which strike him as in any way unfavourable. The report then goes to the chief medical officer, who is responsible for making a recommendation to the directors as to whether the case should be accepted at ordinary rates, or on special terms or declined. Finally, the report, together with the chief medical officer's recommendation, goes to the actuary, who is responsible for making a recommendation to the directors.

Although actuaries are not medical men, they have a long training in the selection of lives, and they not infrequently reject or rate up cases, even when these have been recommended for acceptance at ordinary rates, both by the medical

examiner and the chief medical officer. The converse, however, is rare, and I do not think I can remember any example of a proposal being accepted by the actuary against the advice of the chief medical officer.

Needless to say, the report of the medical practitioner, who has actually seen and examined the patient, forms the basis on which both actuary and chief medical officer must found their opinion. It is clear, therefore, that satisfactory medical selection must depend primarily on the ability of the examining doctor. This, however, is not the only source of information about the proposer. In doubtful cases valuable information may sometimes be obtained from the proposer's own medical attendant, and quite apart from this the management of the insurance company may have private sources of information dealing with the proposer's habits, mode of life and financial position. All of these have to be taken into consideration by the actuary before any final decision is reached as to the eligibility of the proposal.

Few life assurance companies allow a proposer to be examined by his own family doctor, except under special circumstances. The main reason for this is that it is obviously unfair to place the proposer's own doctor in the invidious position of deciding between his duty to the office, which is employing him, and his natural inclination in favour of his patient. Moreover, if a proposer is rejected for insurance, after being examined by his own regular medical attendant, this may easily be a cause of serious friction, as the rejected proposer is apt to blame the examining doctor. Further, the life assurance company may require further information on some doubtful point arising from the examiner's report, and the private medical attendant's views, unprejudiced by any previously expressed opinion, may be of the utmost value.

It should hardly be necessary to warn medical examiners that they must not disclose the results of their examination nor their recommendation to the proposer. This may lead to serious difficulties, as sometimes applicants for life assurance are declined on the strength of confidential information from private medical attendants or other sources. The only circumstances under which a medical examiner might be justified in revealing to the proposer the results of his examination are when he discovers something which urgently calls for attention, such for instance as glycosuria. In such a case the proposer might be advised to consult his own medical attendant.

I should like to emphasise a few important general points regarding the filling up of medical report forms.

In the first place they should be legible. It is remarkable how much time is wasted in the head offices of insurance companies in deciphering illegible reports, and I have even occasionally had to return reports to an examiner, whose writing was completely illegible.

Secondly, it is most important to answer all the questions. If there are any omissions the office usually sends the report back to be completed, involving loss of time and money. Any examiner who is not familiar with the report form is well advised to look through the report and satisfy himself that all the answers are complete before he allows the proposer to leave his consulting room.

Thirdly, the report should be as concise and explicit as possible. The questions in most examination forms are put in such a way that they can be answered "Yes" or "No." Thus, for example, in one report form we find the questions, "Is the heart natural in size, position and impulse?" If the examiner finds nothing abnormal it is quite sufficient to answer this question by the single word "Yes." Yet it is surprising how frequently one finds long rigmaroles about the position of the apex beat, areas of cardiac dullness, and other details in cases where the heart is normal. If anything abnormal is discovered, such, for instance, as tachycardia, even if the examiner does not regard it as of significance, it is most important that it should not be left without comment or explanation. Thus in the case of tachycardia the examiner might make a note that the proposer was obviously nervous.

If, in the opinion of the examiner, the life is considered to be other than average, it is important to give clearly the grounds on which such an opinion has been formed.

FAMILY HISTORY

I shall now pass on to a consideration of certain points, which have important bearings on the eligibility of a life for acceptance at ordinary rates. One of the most important of these is the Family History. When the proposer is under 35 years of age a tuberculous family history should, in my opinion, debar acceptance at ordinary rates, except under very special circumstances. Statistics show clearly that, among the children of tuberculous parents, there is an increased incidence of phthisis, particularly up to the age of about 35. How far this is due to an inherited lack of resistance or to infection in early life is doubtful, but most offices are unwilling to accept young lives at ordinary rates if one of the parents has died of tuberculosis. In the case of the death of a brother or sister from tuberculosis, it is important to ascertain whether the proposer was in contact with the tuberculous

person during the time when he had the disease. If this proves to have been the case an extra rate of premium is usually desirable, but if, for instance, a sister has developed phthisis after marriage and the proposer has not been in contact with her, this is as a rule no bar to acceptance at ordinary rates. It must be borne in mind that proposers often do not know the cause of the death of their parents, particularly when this has occurred relatively early in life. In such cases the full name of the deceased parent, together with the date and place of death, should be inserted in the report form, as this enables the office to obtain a death certificate from Somerset House without further inquiry from the proposer. Needless to say, if there is a family history of tuberculosis, special attention must be paid to the weight and general physique of the proposer. If these are in any way unsatisfactory, the examiner should recommend that the proposal should be deferred or declined.

Apart from a family history of tuberculosis, deaths from apoplexy, strokes and sudden cardiac failure must be viewed with suspicion, particularly if they have occurred at a relatively early age. There is ample evidence that certain families are prone to early development of arteriosclerosis, which may result in early death from cerebral hæmorrhage or thrombosis, coronary occlusion or angina. Special attention should be paid to the blood pressure of the proposer in such cases, especially if he is over the age of 40. As the extra risk is one which is likely to become operative in later life, it is often reasonable to recommend acceptance at ordinary rates for an endowment policy which matures at 50 or 55 years of age, where a whole-life policy would have to be either declined or accepted only with an additional premium. An over-average blood pressure, occurring in a proposer with a family history of early arteriosclerosis, is a most undesirable feature, and as a rule such cases should be declined, particularly if the proposer is over 40 years of age.

Another feature in the family history which calls for special comment is suicide, either of a parent or brother. If the proposer has shown any sign of nervous instability, *e.g.*, a nervous breakdown, and there is a family history of suicide, the case is best declined.

MEDICAL HISTORY OF PROPOSER

The medical history of the proposer is of the greatest importance, and the medical examiner must be careful to see that all questions are answered, and where there has been any serious illness the year of its occurrence and its duration must be stated. I will now deal separately with the various systems.

1. *Cardio-vascular.*—Proposers often state that in adolescence they have been told that they suffered from some such malady as a weak or strained heart or so-called athlete's heart. If the proposer has a normal heart on examination, and has had no symptoms since, the history may be neglected. Similarly, a history of rheumatic fever in childhood is not of importance if the proposer is over 25 years of age at the time of examination and has no symptoms or signs suggesting a cardiac lesion. On the other hand a proposer who has a murmur, even a systolic murmur, with a history of rheumatic fever in the past, must be viewed with grave suspicion.

Proposers over the age of 45 who give a history of fainting attacks, dizziness, dyspnœa on exertion or discomfort in the chest, especially if it is related to exercise, should be declined, if there is any suspicion that their symptoms are cardiac in origin.

The physical examination will be dealt with later.

2. *Respiratory System.*—If the proposer gives a history of pleurisy, it is most important to obtain the following details :—

(*a*) Duration of illness.
(*b*) How long ago it occurred.
(*c*) Was fluid present in the chest.

From the point of view of life assurance, it may be assumed that every case of pleural effusion is due to tuberculosis. The proposal should be deferred until at least five years have elapsed since the attack, and acceptance should be advised only on special terms, when the proposer is seen between five and ten years after the pleurisy. If ten years have elapsed and the proposer is apparently fit and not underweight, it is usually possible to recommend him as a first-class life. In doubtful cases the life assurance company might demand an X-ray of the chest, and in every case where pleurisy has occurred a report from the private medical attendant is desirable.

It must be remembered that pleurisy is a diagnosis which is sometimes made on very inadequate grounds, and if the pleurisy has not been accompanied by an effusion and the illness has lasted less than a fortnight the history may often be overlooked, particularly if the patient is well up to normal weight and the pleurisy occurred several years before examination.

Proposers who have suffered from pulmonary tuberculosis are usually quite ineligible for life assurance, at any rate until ten years have elapsed with complete freedom from symptoms. In such cases an X-ray of the chest is essential, as is also a private medical attendant's report. Hæmoptysis

should always be regarded as evidence of phthisis and dealt with on similar lines.

Proposers not infrequently state that they have been subject to asthma in childhood, which has disappeared on reaching adult life. Such cases can usually be safely recommended as first-class lives. If, however, the proposer is still having occasional attacks of asthma an extra premium is necessary, and if the attacks are frequent or accompanied by bronchitis the case is usually ineligible for life assurance.

3. *Digestive System.*—Proposers often tell the medical examiner that they suffer from "occasional indigestion." It is essential in such cases to inquire fully into the symptoms, bearing in mind the possibility of an organic lesion, such as duodenal ulcer or cholecystitis. Note should be made of the frequency and duration of attacks, whether pain or vomiting occur, whether alkalis, such as Maclean's Powder, are taken, and whether the proposer has ever been away from work as a result of his indigestion, and whether he has been X-rayed. From such inquiries the examiner is usually able to form an opinion as to whether organic disease is probable. In all such cases a private medical attendant's report is essential. Where the symptoms have never been severe, occur at infrequent intervals, and there is nothing to suggest any organic disease, they may be neglected.

When the proposer gives a definite history of a peptic ulcer, his proposal should be deferred until he has been completely free from symptoms for at least three years. Even when this has been the case an extra premium is almost always required to cover risks of recurrence. If an operation such as gastro-jejunostomy has been performed the proposal should be deferred for three years after operation, and after this period only accepted with an extra premium. Gastric ulcers are more undesirable than duodenals, and any proposer over the age of 50 who gives a history of peptic ulcer is usually best declined.

Appendicectomy is of no importance, provided three months have elapsed since the operation. Where, however, the proposer gives a history of appendicitis but no operation has been performed, full inquiries must be made, and if the proposer has had recurrent attacks suggesting appendicitis he is best deferred until appendicectomy has been successfully performed.

Proposers suffering from cholecystitis or gall-stones are quite ineligible for life assurance, but if cholecystectomy has been performed and the proposer has had no symptoms for two years after operation, he may usually be accepted as a first-class life. When the gall-bladder has been drained but not removed, recurrence is frequent, and such cases are best deferred or declined.

4. *Genito-Urinary System.*—A history of gonorrhœa may be neglected, provided there has been only one attack and no complications, such as stricture, have occurred. On the other hand it is doubtful whether proposers who admit to syphilis should ever be accepted as first-class lives, even if the primary infection was many years before and no evidence of late specific manifestations have occurred. In all cases of syphilis there is a potential risk of death from aortic disease, tabes or general paralysis. In every case before acceptance a negative Wassermann examination is essential.

Male proposers over 60 should always be asked whether they have to get up to pass urine during the night, and if nocturnal frequency or any other symptoms suggest an enlarged prostate the case should be deferred. If a proposer has had a prostatectomy performed at least two years before examination, and has had no symptoms since, he may perhaps be recommended for acceptance as a first-class life provided the urine is normal, both on chemical and microscopical examination.

A history of cystitis, pyelitis or renal colic calls for a report from the private medical attendant, and such cases must be dealt with on their individual merits. If the urinary symptoms date back several years, the urine is normal at the time of examination and there has been no recurrence of symptoms, the case is often eligible at ordinary rates of premium. Albuminuria and glycosuria are discussed later.

5. *Nervous System.*—Generally speaking, most organic nervous diseases are steadily progressive and must be declined. This does not apply to residual paralysis, resulting from anterior poliomyelitis, which is rarely of significance as regards life assurance. Nervous breakdowns must always be carefully inquired into and a private medical attendant's report obtained. If the proposer appears in any way unstable and there have been more than one nervous breakdown he is usually ineligible for acceptance.

Special Senses.—The only point of importance is a history of ear discharge. Special inquiry must be made as to the date when it first occurred, its duration and the dates of any recurrences. Persons with chronic ear discharge should never be recommended as first-class lives, and for the estimation of the risk in individual cases it is often desirable to get a report from an ear specialist.

Alcoholism.—Few proposers admit to taking excessive amounts of alcohol, but information as to habits is sometimes available from outside sources, and the appearance of the proposer may

sometimes help the examiner to form a judgment. The occupation of the proposer is important, and publicans are rarely accepted as first-class lives, even if there is no evidence of the consumption of excessive amounts of alcohol. If a proposer states that he is a total abstainer, inquiry must always be made to ensure that he has not become so as a result of medical advice.

PHYSICAL EXAMINATION OF THE PROPOSER

Weight and Shape.—Life assurance companies often provide their examiners with a table of average weights for individuals of varying ages and heights. A deviation of up to 15 per cent. above or below the average is usually allowable. Generally speaking, weights varying more than 20 per cent. from the average cannot be accepted at ordinary rates of premium. Much depends on the age of the proposer and his build. Underweight is a more serious factor below the age of 35 than it is in later life. Overweight, on the other hand, is specially undesirable in proposers above the age of 40. If a proposer under 40 is much underweight and has a family history of tuberculosis or a personal history of pleurisy or any affection of the chest, the proposal should be declined, or at any rate deferred for several years. In proposers who are overweight the build is of great importance. If the abdominal girth exceeds that of the unexpanded chest this is a most unfavourable point. If, however, the overweight is due to a heavy frame with broad shoulders and good musculature without abdominal protuberance acceptance is often possible even when the weight is more than 20 per cent. above the average.

The medical examiner should be careful to obtain as good a chest expansion as the proposer can manage. Often at the first attempt the chest may not be properly deflated and inflated, and on subsequent attempts the expansion may improve. In all cases where the expansion is less than two inches there must be suspicion of emphysema or other abnormal condition.

Overweight is an increasing risk as regards life, and therefore it is sometimes possible to accept a proposer who is overweight for an endowment policy maturing at a relatively early age, such as 55 or 60, where acceptance for a whole-life policy would not be desirable.

Examination of the Heart.—If on physical examination the heart is found to be definitely enlarged or if murmurs are present, which are definite evidence of valvular disease, the proposal must be declined. More often, however, the only abnormality is a systolic murmur. In such a case it is important to determine as far as possible whether this is evidence of organic disease or functional in origin. If the proposer has had rheumatic fever or chorea and has an apical systolic murmur, this is possibly due to a mitral lesion, and the case must be viewed with suspicion. If, however, there is nothing in the proposer's history or physical examination to suggest anything wrong with the heart, apart from the presence of the murmur, it is often of no significance. It is important to examine the heart, both when the proposer is standing up and lying down. A systolic murmur which is not constantly present is unlikely to be organic. The murmur should also be listened for while the patient breathes deeply. If the murmur is only heard during one phase of respiration, usually inspiration, it is probably cardio-respiratory in origin and of no pathological significance. In completing the report it is most important for the examiner to state definitely whether he regards a systolic murmur as functional or organic, and on what grounds he reaches his decision.

Blood Pressure, Pulse Rates and Rhythm.—It is most important that an accurate sphygmomanometer should be used in life assurance work, and the aneuroid type is best avoided as it is more liable to error than is a mercury instrument.

Most life assurance companies ask for readings of blood pressure in all proposers above the age of 40. If the systolic pressure is within normal limits it is extremely unlikely that the diastolic will be abnormal. Often the first reading of blood pressure is rather higher than a subsequent reading, owing to the proposer being nervous or excited. If, therefore, the initial reading is over the average, it is important to take one or two further readings when the proposer has settled down.

A constant systolic pressure of 150 or above is always abnormal whatever the age of the proposer, and below the age of 50 the pressure should not as a rule exceed 145. An over-average blood pressure is of specially unfavourable significance if the proposer is overweight or has a family history in which deaths have occurred from strokes or angina at a relatively early age. Such cases must often be declined, or at any rate limited to short-term endowment policies with an additional premium. An over-average blood pressure is a specially unfavourable feature between the ages of 40 and 50. If the systolic pressure is high the diastolic pressure should always be taken. If this is 100 or above the proposal should be declined. In proposers who are obviously nervous it is often necessary to have them back for re-examination at a later date.

Low blood pressures, provided the proposer is

otherwise unexceptional, are rarely of significance. Many persons in normal health have systolic pressures below 110 or even down to 100. Indeed, statistical investigations have shown that those with under-average pressures have a better mortality than the average.

The pulse rate is often unduly rapid in nervous subjects when it is first counted, and later in the examination it may fall to normal. A persistent tachycardia calls for a specially careful examination of the thyroid. The examiner should never fill in the pulse rate as over 84 without some comment as to whether he considers the increased rate due to nervousness or to any more serious condition.

As regards the rhythm of the heart extra systoles are the only irregularity likely to be encountered. If the heart is normal and the proposer below 40 years of age, occasional extra systoles are generally of no significance, but if the proposer is over middle age extra systoles, especially if frequent, may be the only clinical evidence of underlying disease of the heart muscle. As a rule such cases should be deferred for re-examination in a month's time.

Albuminuria.—Traces of albumin occur frequently in young people and in most cases have no pathological significance. Factors such as exercise and cold readily produce albuminuria. When albumin is discovered and there is nothing else against the proposer, two further specimens should be examined, one passed first thing in the morning and the other during the day. If both of them contain albumin the case should be deferred for three months. If, on the other hand, the early morning specimen is free from albumin but that passed during the day contains a small amount, the albuminuria is orthostatic and probably of no pathological significance. In such cases a small extra premium is often charged to cover the possible risks of the development of nephritis. If both subsequent specimens are free from albumin and microscopical examination of the urinary sediment is normal, the proposal can usually be accepted at ordinary rates.

Albuminuria is a more serious feature in persons over 40, and is more likely to indicate renal diseases than it does in young persons. All such cases need careful investigation before acceptance, even with an increased rate of premium.

Glycosuria.—Cases of diabetes are usually declined, or at best accepted for a short-term policy with a heavy addition.

If a proposer is found to have sugar in the urine a blood-sugar tolerance test should be advised, and also further specimens of urine examined. If glycosuria has been discovered only in one specimen and the glucose tolerance curve is normal the case may be recommended at ordinary rates, provided there is no overweight and no other unfavourable features are present.

Glycosuria which can be shown to be definitely due to a low renal threshold is best accepted only with an additional premium, as some cases of apparent low-leak point glocosuria may later develop diabetes. If the sugar-tolerance curve is of the " lag curve " type, *i.e.*, a high blood sugar soon after injection of glucose falling to normal within two hours, the case may also often be accepted with an additional premium.

THE OPINION ON THE LIFE

The examiner is usually asked to express his opinion as to whether the life should be regarded as average or under-average, and whether he advises acceptance, postponement or rejection. In forming his decision all the factors for and against must be taken in consideration, and even when acceptance at ordinary rates is advised a note should be inserted as to the nature of any potentially favourable or unfavourable feature. If the life is judged to be under-average, the grounds on which this decision is made should be briefly but clearly summarised. If postponement is advised it should be stated for how long. If the life is declined a clear statement of the grounds for the decision should be inserted.

If the examiner advises that a report from a private medical attendant should be obtained he may defer making his recommendation until he has had an opportunity of seeing the report.

The Indications for Operation in Head Injuries

This is one of a Series of Papers by Ward Clerks, which have been read before the Slesinger Firm.

MR. CHAIRMAN and GENTLEMEN,—Injuries to the head may involve any part of it, but it is in the treatment of cranial, and especially cranio-cerebral, injury that the closest attention must be given from the start if the best possible result is to be obtained.

This paper will examine first, and in most detail, the operative indications in such cases, and will deal more cursorily with the treatment of facial injuries.

Treatment is in all cases directed first to saving the life of the patient. All the authors consulted agree that this is the proper ethic, in spite of the not always favourable prognosis for complete

restoration of pre-traumatic function in the more severe cases—the " surgical triumphs."

The questions to be decided in cases of head injury are: " Does operation afford the best chance of recovery from damage to the brain, present, or likely to ensue through physical, or bacterial agencies? " and " At what time will operation offer the best chance of success, having regard to the local and general condition of the patient? "

This implies that any but the slightest head injury must be admitted to hospital and the variations in the nervous, vascular and respiratory symptoms watched most carefully for changes, diagnostic of a local sequel to injury indicating the advisability of operation. Hence, all cases should be treated for shock with rest, quiet and warmth, stimulants always, and sedatives as far as possible, being withheld.

It is then found that head injuries fall into four groups :—

1. Those cases which resolve by themselves with adequate hospital care. These are the " concussions " of varying degree, and Armour estimates them as two-thirds of all cases.
2. Cases inoperable from the start.
3. Those in which indications for operation are present on admission.
4. Those in which indications for operation arise :—
   (*a*) Soon after admission.
   (*b*) From the incidence of late sequelæ.

The second group show themselves at once by the signs of massive cerebral damage. The temperature rapidly rises or is persistently very subnormal, the pulse is fluttering and usually rapid, no spontaneous movements occur, the limbs are completely flaccid. The coma is maximal, the pupils widely dilated and fixed, and corneal reflexes are absent. Trotter, Jefferson and Armour all agree that operation is useless, though Rawling thinks operation is justified as a desperate measure in selected cases rapidly developing a similar symptom-complex.

In the third group we have cases showing indications for surgery by inspection, direct or X-ray. They comprise scalp wounds, depressed fractures and penetration of bone fragments, or, as frequently in war, foreign bodies. All are absolute indications for operation as soon as shock has passed off.

The scalp wounds should be treated by the most thorough possible sterilisation and loose suture, using even sliding flaps if the *débridement* requires them. Sharp-cut wounds, however big, short of complete scalping, do well thus. The last must be treated by Tiersch grafts on the bone. The bone beneath a scalp wound must be carefully examined for the presence and direction of any fracture.

If a depressed fracture is found it must be elevated and the bone discarded. The dura is examined. If torn, the fragments responsible must be carefully removed after widening the opening. If a hæmatoma is seen within an intact dura, instruments are changed and it is incised to remove the clot, according to Trotter and Jefferson. The risk of infection in such an immediate operation is too great, however, according to Rawlings, and should be deferred. Nevertheless, if an early arrest of oozing is made, and infection avoided, it seems that the prognosis would be improved.

The operation for foreign body should be done as soon as possible. A wide decompression should be done, and in most sites about the vault, the triradiate " Isle of Man " incision of Cushing is most useful. The foreign body is removed at whatever risk, since the risk of suppuration about it and the great risks involved in secondary removal just outweigh the trauma occasioned by primary removal. The track should then be gently irrigated and an attempt made to remove fragments of damaged tissues, done with a soft rubber suction catheter. The results of such operations in war time are quite encouraging even with severe brain injuries, especially if confined chiefly to silent areas. Operation should be immediate, with suture of the skin flap firm to avoid herniation.

Whether the concussion stage is long or short, in cases of head injury where there has been unconsciousness for any length of time there is probably always an element of contusion and consequent œdema. This is the first type of case met with in the last group of head injuries. One must watch carefully for the irritative signs of compression due to such œdema. They may not be localised, but consist of general irritability and photophobia going on sometimes to continuous delirium. It is in this type of case that a pulse chart is of most assistance amongst head injuries.

If such signs arise, a lumber puncture should be done at the end of 24 hours (Rawlings recommends this as a routine in all head cases). The presence of blood-staining is an indication for operation. Its absence is not diagnostic, but if the pressure is above 200 mm. and not obviously dangerously high, medical treatment is justified to start with. This includes lumbar puncture at intervals, rest with sedatives in a suitable posture, with magnesium sulphate orally or rectally and on occasion hypertonic glucose. The rapid reappearance of the irritative symptoms without localising signs after such measures is an indication for right

subtemporal decompression, even if contusion and œdema alone can be positively diagnosed. In these cases, subdural hæmatomata will not always be found, but their presence is not rare.

The major group showing signs calling for decompressions comprises the extradural arterial and subdural venous hæmatomata.

The first help obtained in diagnosis is from the history. The type of instrument causing the injury, whether pointed or blunt, of high or low velocity, the direction of action and the severity of the blow all help in assessing first the possible presence, and next the probable site of the bleeding or brain laceration. Fracture of the skull usually indicates damage severe enough to cause hæmorrhage. In estimating the site, even if other evidence corroborates that of local damage, *contrecoup* must always be remembered.

In children the presence of subaponeurotic or subperiosteal hæmatomata, especially if becoming more tense on crying (a pressure on the abdomen), or, sometimes, actively pulsatile, is diagnostic of intracranial hæmorrhage and an indication for operation when pressure symptoms are seen. Elevation of the pond-shaped depressed fracture of infants should also not be performed early unless such symptoms appear.

The next signs of the actual presence of intracranial hæmorrhage are the neurological signs of progressive compression with localising features. The actual situation of the hæmatoma with reference to the dura is unimportant, except in prognosis, but usually simple extradural hæmorrhage is distinguishable from intradural.

In extradural hæmorrhage the cardinal sign is the lucid interval. The unconsciousness from concussion passes off, shock is being treated, the blood pressure rises and gradually the dura is thrust against the brain by the ensuing hæmorrhage.

Intradural hæmorrhage, which is not at once fatal, is venous oozing unaffected by these changes, and present from the start from venous stasis due to shock.

One pitfall may be mentioned. If a unilateral hæmorrhage has raised intracranial pressure sufficiently to affect the vasomotor centre, this may be acting rhythmically (" Cheyne Stokes phenomenon ") instead of, as more usually, maintaining a steady elevation; when blood pressure is high, spontaneous movements may occur on the same side as the lesion, and be mistaken for Jacksonian fits due to contralateral cerebral irritation. If the case can be carefully watched this will never be diagnosed, since bulbar compression is a late event and preceded by the earlier symptoms of compression irritability and compression coma following concussion unconsciousness.

The localising signs are set forth by Trotter in tabular form, and together will indicate the site in the brain with the side of the lesion, and the stage of compression reached.

In the hemisphere the irritative symptoms in the motor cortex are either Jacksonian fits or rigidity in the area supplied, the paralytic hemiparesis, spastic hemiplegia with exaggerated tendon reflexes and flexor plantar response.

In the area of Broca paralysis is shown by aphasia. Jefferson points out that this inability to speak has on occasion been mistaken for persistent concussional unconsciousness.

In the occipital lobe paralysis is shown by hemianopia. The other sense areas are of unreliable localising value.

Jefferson also quotes incontinence as a good pointer to frontal paralysis, and mentions one striking case of " sham rage " due to irritation in this area.

In the midbrain irritative conditions produce contracted and sluggish pupils, paralytic, dilated and fixed pupils.

In the bulb paralysis is shown by shallow, gasping, irregular breathing, rapid, small, weak pulse, and falling blood pressure, irritation (venous stasis), by deep, slow breathing (usually stertorous from somatic pareses), slow full pulse, and rising blood pressure.

The changes in consciousness due to pressure on the hemispheres are irritability or delirium, or drowsiness and slowness in the irritative stage, and coma in the paralytic stage.

These statements are rather stereotyped, and, as Trotter points out, the great diagnostic point in detecting and localising intracranial hæmorrhage is the progressive nature of the symptoms. Irritation is present in one region, paralysis in another. The Hutchinson pupils are a good example, though it should be possible to localise a supratentorial lesion before they appear as a late sign.

Two important points of diagnosis must be mentioned. At one point Trotter states that alcoholic excitement and the irritative modification of consciousness are indistinguishable; at another he is more sanguine and says that the attitude in the two cases does show points of difference. Always, however, the ensuing stupor is distinguishable; therefore all inebriates with head injuries should be admitted. Indications for operation will arise.

Next, is the head injury the primary cause of unconsciousness? Of diabetic and uræmic coma only the former is sufficiently sudden to cause a fall giving rise to head injury, and here the history

of the accident, and, if possible, of the patient, with a test for acetone will help. The coma is treated, and indications for operation awaited.

The symptom complex of compression will vary very greatly from case to case, even with similar injuries, but if the progression from excitement to stupor, from Jacksonian fits to hemiparesis, from a contracted and reacting to a fixed and dilated pupil, and so on, in whatever permutation or combination, are observed and recorded, the indications for operation and usually for the site of decompression will become apparent. One difficulty remains in determining the latter, the diagnosis of hemiplegia in coma. The flaccidity of limbs, cheek and mouth, the elevation of temperature and absent abdominal reflexes and flexor plantar responses on the affected side are valuable. If these are not definite, Trotter mentions that a hypertonic injection may relieve coma and permit diagnosis. This would seem to have its risks in increasing bleeding subsequently.

The time for operation is clearly important. Jefferson, Armour and Rawlings all emphasize that a period must be allowed for recovery from shock. The first and last of these give no specific guidance after that, nor indeed does Trotter. In his article the precept is strongly implied that operation is indicated as soon as unequivocal evidence of compression arises. This would seem to have no disadvantages. Armour, however, is categorical that the best time for operation is in the " stage of capillary anæmia " with paralytic symptoms, and venous stasis short of papillœdema present in the fundi (which, according to Rawling's, was not found in 200 cases of traumatic compression, with the assistance of an ophthalmologist). Armour gives no reason for this advice. Perhaps it is empirical, or perhaps it is given because anæsthesia need be minimal.

The anæsthesia used in craniotomy should be local only, so far as possible. Cushing found in extracting foreign bodies from conscious patients that the added advantage to the obvious avoidance of rise of blood pressure and absence of toxic effects on the medulla, with no post-operative vomiting, lay in the ability of the patient to co-operate.

We have dealt now with the indications for operation immediately, and after short delay. Conditions arise indicating need for operation after longer periods.

The first is chronic subdural hæmorrhage. Symonds is particularly insistent that this condition should be anticipated in even the most trivial injuries in old people. It most commonly follows a fall in the sagittal plane. No concussion follows in many cases. The patient is normal, it appears. But there has been a slight tear in the cerebral veins in their course between the sulci and the sinus. Cough, straining at stool, and other effort cause gradual venous oozing. Symptoms of chronic compression come on. They are most varied. Slowness of cerebration, headache, drowsiness or irritability, occasional vomiting and " fainting attacks," so thought of, are samples. This syndrome with a history of a fall is an indication for operation.

They are suitable cases for a bone flap exposure, but should always be trephined on the other side, even if a hæmatoma is found and evacuated.

These should not be operated on using a bone flap if they have shown sudden acute exacerbation of compression, nor should other cases of acute compression. The proper operative procedure is the use of large skin flaps, the removal of all bone required, the evacuation of an extradural hæmatoma, and incision of the dura, if (*a*) it is lacerated, (*b*) a hæmatoma is seen beneath, and (*c*) if the brain expands strongly into the wound.

Trotter deprecates artificial drainage in most cases, Armour advises a glove drain for 48 hours, and Rawlings goes so far as to recommend drainage with dural suture. This last is contraindicated as introducing foreign bodies close to the brain. Both these procedures, further, seem superfluous if hæmostasis and the decompression craniotomy is adequate, since the required drainage by oozing of cerebro-spinal fluid is automatic, if merely a subcutaneous drain is used.

For active hæmorrhage, the meningeal artery is ligated or plugged if possible, or muscle grafted. For sinus tears Cushing recommends fascial grafts, and for arachnoid vessels, silver clips.

To return to late indications for operation. Persistent post-contusional headache unrelieved by rigid medical treatment is often cured by local decompression. The spot chosen is indicated by the region injured originally or by any neurological signs. A previously unnoticed depressed fracture is sometimes found in such cases.

Again, if after a first evacuation of a hæmatoma, compression symptoms recur, a second operation is indicated, and should be done as the signs indicate at the original spot or the contrecoup region.

Finally infection is a late indication for operation. Infected hæmatomata of the scalp, subcutaneous, subaponeurotic, or subperiosteal should be freely opened and drained, and, if necessary, treated with Dakin's solution. In the last type the necrosed portion of the outer table should be fairly widely removed with a gouge.

In the absorption of large sterile hæmatomata, constitutional symptoms may appear, but with

full asepsis no harm can be done, and the reaction is shortened, if they are opened and drained for suspected infection. In children a long-standing subperiosteal hæmatoma should be removed if ossification is too vigorous at its margins.

Fracture of the skull is not *per se* amenable to, or an indication for, operative treatment. The treatment adopted if such a fracture is likely physically to affect the brain has been mentioned, but fractures of the base raise other considerations.

The dural space may be put in communication with nasopharynx or middle ear. Light sterile tampons are indicated primarily; the treatment of persistent cerebro-spinal rhinorrhœa is of necessity surgical, if anything, and an attempt to close the gap to outflow of cerebro-spinal fluid and ingress of bacteria is justifiable, by suture or fascial graft. Similarly, persistent and profuse hæmorrhage from the meatus is a sign that the middle meningeal artery is bleeding into the middle ear through the tegmen, and an indication for craniotomy and ligature.

If infection does supervene there is an indication for opening the dura and free drainage of the cerebral abscess or other localisation, with general measures.

Another sequel of fractured base giving indications for late operation is an arterio-venous aneurysm of the internal carotid. When it is judged that the cerebral blood supply is well compensated for on the affected side, ligature of the external and internal carotid arteries at the bifurcation is indicated.

In most recoverable basal fractures the facial nerve is contused in the aqueduct and recovers function later. Any case in which it is not so may be treated by grafting cranial nerves XI or XII into its distal stump, or by a masseteric transplant. In Ballance's experience the hypoglossal nerve gives the best functional result.

Finally, as a very rare complication of fracture over the frontal or mastoid air cells pneumocephalus may arise. Active treatment in the absence of resolution is not very hopeful, but the results of ordinary decompression and attempted evacuation are poor. A small incision over and into the affected sinus should be made.

In facial injuries surgery is, on general principles, indicated for arrest of hæmorrhage, *débridement* of dead tissue, occasionally for wiring of fracture and for plastic repair of mutilation.

Arterial hæmorrhage should be arrested with ligature. *Débridement* of soiled wounds should be as little as possible to avoid tension and scar-contracture deformity. If a fragment of coronoid process of the mandible is detached, it should be wired back in place.

If the eye is irreparably damaged the extent of the contamination in the orbit must decide between enucleation and a good prosthesis and an evisceration.

In the nose the only operation which may be indicated, apart from a plastic repair, is the evacuation of a septal hæmatoma, which is a surer guarantee of a good end result than conservative treatment.

The plastic surgery of the face, following such injuries as burns from explosives or chemicals, is a very specialised subject, and general surgical principles govern the indications for operation.

Head injuries requiring operation have been classified as :—

Those requiring immediate operation.
Those requiring early delayed operation.
Those requiring late delayed operation.

Immediate operation is performed for an infected scalp wound, for penetrating wounds of the cranium, and for depressed fracture, or any compound fracture diagnosed by inspection.

It is essentially a *débridement* operation to remove dead tissue and foreign bodies.

Early delayed operation is indicated in the presence of compression. The diagnosis of this has been fully discussed.

Late delayed operation is for the sequelæ of head injury :—

1. Recurrence of compression signs.
2. Post-contusional headache with compression signs.
3. Chronic subdural hæmatoma.
4. Infection, localised meningitis or brain abscess
5. Such rareties as arterio-venous aneurysm, persistent loss of cerebro-spinal fluid, pneumocephalus, and persistent facial palsy.

Of these classes the early delayed decompression is most important and frequent, and compression must be diagnosed. When treated by decompression the results vary with the injury, but recovery is often complete. This statement raises the last indication for operation. Some patients do not become at all innured to the decompression defect, and suffer from headache and unpleasant symptoms when stooping, or even have epileptic fits. In these cases the stoma should be closed with a rigid obturator in the absence of contra-indications, and Trotter prefers flat bone grafts.

The essential feature emerging from this examination of the whole range of head injuries is that *Vis medicatrix Naturae* may be powerless in the face of two main conditions infection, and compression within the cranium beyond the natural reserves of accommodation. *Vis medicatrix Chirurgici* is then its only ally, and should be applied with energy and discretion.

Reviews

The Art of Surgery. By H. S. SOUTTAR, M.A., D.M., M.Ch., F.R.C.S. Published by Messrs. Heinemann, Ltd. Third Edition. Pp. 622. *Price* 30*s.*

THIS is without doubt an excellent book, and, in spite of the many recent advances in surgical practice, the fact that a fresh edition is called for when only four years have elapsed since the last seems to indicate that Mr. Souttar has already established its popularity.

In many ways this book is original, and, although the opening chapters follow the modern, and seemingly invariable, convention of describing inflammation and repair, we found the general outlay particularly refreshing, with its wide margin on the right-hand side for notes and subheadings, and the inclusion of thumbnail sketches illustrating small points in the text.

Of these minor illustrations, there are many new ones added to the third edition, and, for the purpose of crystallising the word-picture implied in the written description, they are a valuable asset and a principle which might be widely copied.

However, though we appreciate the fact that the majority of these drawings were made by the author, and greatly admire his versatility, many of these seem to lose much of their clarity from over-shading, and, in consequence, the points they emphasise are apt to be obscured. The simple line drawings of fractures, in contrast, are excellent.

There is very little of a revolutionary nature in the teaching provided in this book, and most of the orthodox views on surgical practice to-day are included in Mr. Souttar's advice, which is laid down in a simple and concise fashion, and is obviously the outcome of a world-wide experience.

In all, Mr. Souttar's "Art of Surgery" is a most valuable book, and one which could be read with advantage by both students and practitioners, as the cover suggests; and we ourselves would go further and recommend it to everybody who is interested in modern surgical thought.

Adonais, A New Life of Keats. By DOROTHY HEWLETT. Published by Messrs. Hurst & Blackett, Ltd., London, 1937. Pp. 443, Ill. 12. *Price* 15*s.*

JOHN KEATS was a Londoner, born in Moorfields on October 31st, 1795. He is reported to have been a seven-months' child, which may account for his short stature. His school-days were spent in the then country district of Enfield, his education and the teaching of his school-master, Cowden Clarke, profoundly influenced his poetic life.

After an apprenticeship to the school doctor, Dr. Hammond, Keats was entered at Guy's in October, 1815. For a time he was resident in St. Thomas's Street. While there, his favourite leisure place was a window seat from which he could view the street, and here he wrote one of the most famous lines in English literature, "A thing of beauty is a joy for ever."

Other poems which are especially related to his residence at Guy's are the Sonnets beginning "O Solitude! if I must with thee dwell" (No. vii); "Keen, fitful gusts are whisp'ring here and there" (No. ix); "Much have I travell'd in the realms of gold" (No. xi). The two latter were composed during long walks returning to the Borough late at night. All may be read in full in the volume of Keats's poetry contained in the College Library. One of the medical note-books which he made is preserved in the Keats Museum in Hampstead.

After qualification in July, 1816, Keats decided to abandon medicine for poetry. The outcome of this decision was the publication early in 1818 of a four-thousand line poem "Endymion," composed in part in the Isle of Wight and at Burford Bridge, under the shadow of Box Hill.

In the summer of 1818 a long walking tour was undertaken in the North, the weather was severe and the conditions hard. Before its conclusion an attack of laryngitis proved the commencement of a tuberculosis which three years later ended fatally. Amidst sorrow, illness and journalistic discouragement Keats worked on, and in 1820 produced his last and greatest volume. It contains the "Ode to Autumn," so fitting to the mood of this season, the "Ode to a Nightingale," written in his garden at Hampstead, and other work which critics agree in assigning to the highest rank in English poetry, as his letters take their place in the prose writings of our country.

The volume before us is the best general account of his life and work which we have read. Relating the biographical side of Keats's life with the fascination of a story, the poetry is also dealt with fully, but not in the technical manner which, while interesting to the specialist, is unacceptable to the general public. We hope that the book will find many readers at Guy's and increase our acquaintance with the great man who lived and worked in our precincts and who so established himself in the hearts of his friends that his nickname "Junkets" has come down to us.

F. N. D.

Correspondence

The Bum-Punchers

To the Editor of the GAZETTE

SIR,—The Bum-punchers are the high priests of a fairly recent and very remunerative cult which is rapidly displacing the pagan beliefs in the witch doctor's omnipotence among the semi-educated and mission-ridden tribes of Equatorial Africa.

Erlich never dreamt that, in evolving his 606, he was giving birth to a panacea which has helped to enrich many a doctor practising in the wilds of the Dark Continent.

Yaws, lesions and syphilitic ulcers which clear as if by magic with a few injections of N.A.B. have led the natives to demand injections for every form of ailment.

Some members of the medical fraternity were very quick in seizing this opportunity of putting by a few groats for a rainy day, and so bum-punching was born.

Market day in the village is obviously the best time for the high priest to appear on the scene. In a little hut away from the market place he stands with the paraphernalia of his cult: a 10 c.c. syringe, needles, a bowl full of N.A.B. solution, some wool, iodine and, most important of all, a money bag.

The worshippers, having dropped their contribution in the bag, flock to the altar, uncover the fleshy part of their anatomy, and receive a painful arsenical blessing.

True, a good few worshippers, possibly 50 per cent., derive benefit from the ritual. The remainder may be suffering from piles, pyorrhœa or psittocosis—who cares? This is Molière on a grand scale. *Purgare repurgare.* Hundreds have come and gone; the priest is perspiring hard, his back is aching, his fingers are tired, but the money-bag is full. His conscience? Well, we presume it is clear, for, after all, one cannot make an omelette without breaking a few eggs.

Yours, etc.,

A GUY'S MAN IN AFRICA.

Starlings in the Park

To the Editor of the GAZETTE

SIR,—On the page headed "Country Life," in the *Spectator* of August 13th last, written by Sir W. Beach Thomas, is a paragraph "Quiet," referring to the effect of noise on wild life. The last two sentences read as follows: "Of these, starlings cannot be driven from favourite haunts even by the gun, but they are more sensitive to noise at night. The explosion of crackers under their roost on successive nights has succeeded even when every other effort to drive them away has failed."

It sounds almost too good to be true that this pest and plague of noisy and noisome birds to which patients and nurses especially have unwillingly submitted for so many years might be got rid of by the means suggested. Sir W. Beach Thomas knows full well what he is talking about, none better, and at least the method seems worth a trial. No doubt the acknowledged ingenuity traditional in the Works Department, aided, perhaps, by Messrs. Brock & Co., could devise a "set-piece" which would give the offending birds the shock of their lives and thereby, I hope, set free our suffering community from a perennial menace to their health and comfort.

Yours, etc.,

JOHN FAWCETT.

10, Chester Terrace,
Regent's Park, N.W.1.

Biennial Dinner

To the Editor of the GAZETTE

SIR,—The Biennial Dinner is to be held at the Connaught Rooms on Saturday, October 30th, under the chairmanship of Dr. John Fawcett. All Guy's men with medical or dental qualifications are eligible to attend, and it is hoped that all who can possibly do so will keep this date free. A programme of post-graduate lectures and demonstrations at the Hospital is being arranged for October 29th and 30th, and further announcements regarding this will follow. All old Guy's men whose addresses are in the *Directory of Guy's Men* will receive a circular with application form for tickets.

Yours, etc.,

GEOFFREY MARSHALL,
Hon. Secretary,
Guy's Biennial Dinner.

45, Wimpole Street,
W.1.

Hospital Information, etc.

Pass List

ROYAL COLLEGE OF PHYSICIANS.
M.R.C.P.
July, 1937.

A. E. Lillicrap — Gavin L. B. Thurston
A. Nelson-Jones

UNIVERSITY OF LONDON.
FIRST EXAMINATION FOR MEDICAL DEGREES.
Internal Students.
July, 1937.

S. H. Bochner — G. H. T. Lloyd
R. W. Booth — J. R. P. Murley
D. W. Burgess — D. D. Rees
D. M. Carnegie — J. P. I. Rose
P. B. Counsell — F. H. Staines
W. J. Ford — S. D. Stock
L. H. G. Handley — G. F. Swann
P. W. Hopper — T. E. van Perlotein
E. Horne — C. H. Watts
R. H. Hughes — D. H. J. Williams
A. V. Hurst — T. R. Wooldridge
B. Kustow

External Students.
J. Rankin.

SECOND EXAMINATION FOR MEDICAL DEGREES.
PART I.
Internal Students.
July, 1937.

A. B. Alhadeff — R. H. Hughes
C. L. F. Beaton — M. P. Hutchinson
D. W. Burgess — F. R. C. Manning
P. N. Cardew — J. K. Martin
D. H. Crook — L. G. C. Martin
P. S. Cuthbertson — J. M. Munden
C. M. Dave — W. A. Porter
C. N. d'Este Eastes — H. A. Ripman
P. W. Edward — B. Rowlatt
P. R. C. Evans — F. R. Russell
G. C. Foster-Smith — R. M. Sharpe
L. R. R. Fourman — A. L. H. Smith
B. J. Fowler — A. W. P. Stone
M. F. Gallop — D. I. Thomas
E. J. Grierson — J. Williams
A. W. Hind

M.D. EXAMINATION.
July, 1937.
BRANCH I.
Medicine.
* A. Nelson-Jones.

* University Medal.

SECOND EXAMINATION IN DENTAL SURGERY.
PART I.
July, 1937.

W. G. Cross — W. J. Head
D. P. Finnegan — D. L. Rugg-Easey
J. G. Hancock — K. R. Titford

The following are credited with Anatomy and Physiology.
H. A. Buck — R. E. Matthews

SECOND EXAMINATION IN DENTAL SURGERY.
PART II.
July, 1937.

P. K. Hopkins — *H. Rees
D. A. Priestley

* Awarded a mark of distinction.

THIRD (B.D.S.) EXAMINATION IN DENTAL SURGERY.
July, 1937.
GROUP II.
F. McCombie.

UNIVERSITY OF CAMBRIDGE.
Diploma in Medical Radiology and Electricity.
PART II.
July, 1937.
J. A. Brocklebank.

UNIVERSITY OF OXFORD.
M.B., B.CH.
June, 1937.

Medicine, Surgery and Obstetrics.
M. A. Partridge — A. L. Young
R. H. S. Thompson

Pathology.
J. S. Astbury — E. B. G. Reeve

Anatomy and Physiology.
P. R. Cooper.

Forensic Medicine and Hygiene.
O. I. Green — M. A. Partridge

Materia Medica.
J. A. L. Leeming — E. Smith
E. S. Nicholson

Biology.
C. C. Kennedy.

Physics and Chemistry.
C. C. Kennedy.

Appointments

R. W. Waldie, L.D.S., appointed Hon. Dental Surgeon to Richmond and District Victoria Hospital, Yorkshire.

J. H. Stevens, L.D.S., appointed Dental Surgeon to the Wembley Maternity and Child Welfare Centre.

J. A. Wakes Miller, M.B., B.S., appointed Assistant Physician, Hospital of St. Cross, Rugby.

Changes of Address

J. W. Schabort, M.D., 33, West Street, Lower Houghton, Johannesburg, South Africa.

H. M. Kelsey, Abbey House, Angel Hill, Bury St. Edmunds.

W. J. R. Cole-Morgan, Fascadale, Bryngwyn Road, Cardiff.

H. L. Eason, C.B., C.M.G., M.S., 8, Russell Mansions, Southampton Row, W.C.1. *Terminus* 1137.

H. O. Salt, L.D.S., R.C.S., 6, Rosary Gardens, South Kensington, S.W.7. *Kensington* 9955.

W. H. Bradbeer, M.B., B.S., 4, Higher Terrace, Torquay. *Tor uay* 3763.

EDS. { A.G.W.H. / H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

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PASSIM

ON several occasions lately we have had to remark upon notable retirements and departures, and it comes as a pleasant change to notice some familiar faces, which have recently returned to the Hospital after many months of absence. Of course, we do not mean just anybody who may have been away on holiday, but refer particularly to Mr. Hughes and Mr. Ogilvie, both of whom have been seen about the Hospital during the last week, and who, we hope, are now thoroughly restored to health and strength after their long period of illness.

Mr. Hughes' afternoon rounds in the Surgical Wards have long been one of the chief attractions of the surgical teaching of this Hospital, and, judging by the crowd which attended him on his return last week, they must have been missed by a far wider circle than his immediate firm.

We hope most sincerely that the unhappy coincidence which deprived the Surgical Staff of both Mr. Hughes and Mr. Ogilvie—whose progressive methods and scholarly writings have been missed no less than Mr. Hughes' rounds—at one and the same time, is too fantastic a stroke of misfortune ever to occur again, and, while not forgetting the work of Assistant Surgeons and Surgical Registrars, who have worked unceasingly in an attempt to provide an adequate amount of teaching, we would add our rejoicings to those of the multitude of students at present in the wards at the prospect of our surgical Teaching Staff once again assuming, as it were, its full strength.

IN a hard and unsympathetic world, full of rogues and vagabonds, where we eke out a miserable existence as perpetual targets for playful pigeons, threading our way between rude boys brought up to regard the adult frame as constituted in equal parts of cigarette cards and copper coins, we have always held that food is one of the higher forms of pleasure, and, ignoring reproachful looks from tailors' cutters when the abdominal profile assumed a somewhat pseudocyetic shape, we have often sought refuge from the cares of life behind some culinary masterpiece designed by the College cook.

However, during the present heat wave, which marks the opening of the football season, ordinary food has begun to pall, and even the Potage Minestrome—that evergreen dish of surprise—seems somehow to have lost its former relish, and the mildest of alimentary indiscretions is apt to be followed by turbulent symptoms of alarming proportions.

In this connection, and with deepest sympathy with the sufferers, we note that the usual epidemic of food poisoning has broken out in the King's Cross and St. Pancras district, but place no reliance on the suggestion that this epidemic has been perpetuated from those of previous years by organisms nestling snugly within a station sandwich, and incubated in one of those unique glass cases which are to be found in any of our larger termini.

No doubt the epidemic is already under control, and we hope that some idea as to the causal organism and of effective methods of prevention may be derived from its investigation, feeling thankful meanwhile that we live in a district which is singularly free from this form of disease. However, though we may see little of epidemic food poisoning in this neighbourhood, there is always the seasonal outbreak of what, for want of a better term, is known as "summer diarrhœa" in children, and it is at this time of year, more than any other perhaps, that we are conscious of the miserable inadequacies of our present accommodation for children in this hospital, and with

greater earnestness than ever do we offer up our annual prayer that something may soon be done to remedy this lamentable state of affairs.

It was some two years ago now that we drew attention to the fact that Dr. Cameron and Dr. Hampson had between them built up one of the largest out-patient clinics for children in London, and pointed out that it was a pity that this magnificent work should suffer so persistently for lack of in-patient accommodation, but, after several more efforts at stimulating interest in this subject, our hopes were all but dead, when in February of this year came the joyful news of the Caleb Diplock legacy, bringing, as it did, no less than twenty thousand pounds especially for the benefit of the Children's Department.

We were delighted, as at last it seemed possible that something might be done to remove a disgrace of which all must be mindful, even if unashamedly so. But no; somehow the Children's Ward of this Hospital has always been something of a Cinderella, and for years now there has existed an extraordinary apathy towards doing anything for its benefit, which has at times almost amounted to wilful neglect. More than twenty years ago now, a scheme for rebuilding the whole Department was prepared, but then the war came and the plans were put away, and no doubt were blown to pieces in an air raid, for all that was ever seen or heard of them again.

The Bermondsey and Rotherhithe War Memorial Ward in the Park was adequate and well situated for a time, but was demolished to make way for Nuffield House, and the children were forced to seek shelter in a corner of Clinical, where such sanitary contrivances as were provided had to be shared with the male patients in the other side of John Ward. This was far from an ideal state of affairs, but nobody seemed to mind, and anyway, it was not long before the luckless brats were on the move again, and this time came to rest in a bit of old Bright, which seemed no longer needed by anyone else, and here they are to-day, while we wait with, no doubt it will be said, ill-concealed anxiety, to see what use the Caleb Diplock legacy will be put to, and when we may expect something tangible in the way of results.

Much has been suggested, and more rumoured, as to the proposals for spending this money, and, some weeks ago at any rate, it seemed likely that it would be used to rebuild what was Bright Ward and convert it into an up-to-date Children's Ward, complete with balconies for open-air treatment, glass panelling to minimise cross-infection, as well as adequate isolation accommodation and many other small but necessary adjuncts to the treatment of children, which have never been seen in this hospital before.

Such a scheme to us seemed eminently sensible, and when we heard that Dr. Cameron might be asked to stay on for a few years beyond his normal time for retiring, so as to supervise the reconstruction of this Department, which already owes so much to him, we were delighted, and felt that now there could be little cause for delay.

However, that was several weeks ago, and now, after the Committee appointed to deal with this matter of plans for reconstruction has struggled on in the absence through illness of the architect, we have heard the suggestion, indirectly maybe, but with a certain assurance, that the whole question be once again shelved and that nothing be done for the children until the time, and money, comes to rebuild the whole of the Surgical Block, in a corner of which they can then be lodged.

This suggestion we view with the greatest concern, since it means at the best several more years of delay, and, while we doubt whether the children would derive any particular benefit from being in the midst of the proposed new Surgical Block, we are terrified lest that marked and mysterious aversion to the encouragement of pædiatrics should prevail once more, and the children, with their legacy and long-cherished ideal of a ward of their own should vanish once more into the mists of obscurity.

▭

LATELY we have received strange pieces of news from two outposts of our mighty Empire. In Southern India a man was brought before the magistrates and charged with biting his neighbour's dog. An ungentlemanly act at the best of times, but the plea that he was doing it " to teach the dog a lesson " seems to clarify his intentions not one jot. Biting, in our experience, has been one of the lessons which dogs learn easily enough by themselves, though this one seems to have shown admirable restraint in not retaliating, and we think that the magistrate was amply justified in ordering the defendant to pay the " doctor's " bill. Anti-vivisectionists please copy.

Somewhere about the same time, so we read in the *Nursing Journal of India*, a magician was in the habit of swallowing penknives for the amusement and mild amazement of his audiences, somewhere in the North. However, just as a child may lose the key of its money box, one day the wizard found that he had lost the art of disposing of the cutlery that he had swallowed, and was, for the moment, in rather an awkward predicament. But, unwilling to give up his livelihood, he continued to give his performances, with the result that he began to get a large accumulation of ironmongery within his

stomach, and before long a feeling of abdominal discomfort appeared, which, not unnaturally, grew with ever performance.

So great was his distress after a while that he sought medical aid, and after a preliminary X-ray examination, which amply confirmed his story, he was sent down to Bombay to be operated upon, and is now making an excellent recovery after having the following collection disentangled from his gastric mucosa :—

Eighteen penknives of various descriptions, some with wooden handles almost entirely digested.

Five steel plates, which appeared to be the centre plates from the handles of other knives.

Three naked knife blades.

Two steel door keys.

Four steel hooks from the handles of the more elaborate knives.

A number of steel rivets and loops, such as are used to attach knives to belts.

It has been said that the stomach is the most ill-treated of any of our organs, and that sometimes we are apt to expect more of our digestive juices than we should, a dictum which, in the story related above, seems true enough, though from all accounts this strange man was perfectly correct in assuming that his digestive juices were, if anything, on the powerful side, for all the loose steel parts were eroded almost out of recognition. We suggest that a test meal would have produced interesting results, so long as the tube could have been kept undigested for any length of time.

The Future of Speech Therapy

A Lecture delivered by H. St. John Rumsey, M.A., on 6th September, 1937

GENTLEMEN,—The future of Speech Therapy depends to a considerable extent upon yourselves. You will be asked from time to time to advise the parents of stammering children, so it is important that you should know the alternative methods and their values.

The rapid expansion of speech therapy during the last few years is satisfactory in so far as it indicates a growing realisation that the stammering habit can be corrected under the guidance of a speech therapist, and that the chance of " growing out of it " is almost a remote one, but it is not at all certain that a large proportion of this expansion is in the direction most calculated to help sufferers to gain control of their speech.

The stammering habit may be described, as everyone knows, as lack of co-ordination of the factors which are combined in speech, but in order to understand the breakdown in co-ordination, it is necessary to consider speech co-ordination at its best, that is, in the case of an expert speaker.

The vibration caused by the breath passing between the approximated edges of the vocal cords is called vocal tone, but the quality of that tone depends principally on maintaining the ideal balance between breath supply and vocal cord resistance. In the case of the expert the vocal cords are firmly approximated with the result that the maximum vocal tone is produced with the minimum breath supply. The stammerer, on the other hand, failing to approximate the vocal cords firmly, uses more breath but produces less tone ; in fact, the vocal tone of the typical stammerer might be described as " breathy," a considerable proportion of the breath escaping between the vocal cords without contributing to their vibration. Thus, the first failure in co-ordination is caused by insufficient vocal cord resistance, but since the vocal cords are not under the direct control of the will and can only be controlled by the mental conception of the sound required, cord resistance must be increased by the thought of full and firm tone.

The vocal tone produced in the larynx is converted into speech as it passes through and out of the mouth ; the size and shape of this most important resonator are constantly being changed by movements of the tongue, soft-palate, lips and jaws, the resultant " shapes " converting the vocal tone and breath into the vowels and consonants which are combined in words. Once again, there is an ideal balance between the flow of vocal tone passing through the mouth and the resistance to that flow of tone caused by the formation of the vowels and consonants, the resistance being strongest in the case of the explosive consonants p, b, t, d, k and g. The expert speaker reduces the resistance caused by the formation of the consonants to a minimum and depends for audibility on the smooth, rhythmic flow of the vowels. The stammerer, on the other hand, by increasing consonant resistance at the expense of the flow of vocal tone, upsets the correct balance between the two to such an extent that for the moment speech becomes impossible. The remedy is obvious, the stammerer must concentrate on the outward flow of tone rather than on the movements which convert that tone into words ; so once again, it is necessary to form a mental

picture of a smooth flow of vocal tone passing through and out of the mouth.

That this is the correct explanation of the stammerer's breakdown is indicated by two well-known facts, first, that nearly all stammerers find their greatest difficulties in words containing explosive consonants when consonant resistance is at its maximum; secondly, that nearly all stammerers can sing fluently, because while singing the attention is necessarily although subconsciously concentrated on the outward flow of vocal tone. Since we are not bi-vocal, but use the same organs for speech and song, it is clear that the stammerer who can sing fluently (as most of them can) needs very little readjustment to enable him to speak fluently. The readjustment consisting in making the flow of firm vocal tone the predominant factor while speaking, as it necessarily is in song. Thus the mental picture of a firm vocal tone solves both the problems of inco-ordination, it increases the vocal cord resistance and so corrects the balance between breath supply and cord resistance, while it also makes the flow of vocal tone the predominant factor in speech and thus keeps the consonant resistance in its correct proportion.

There is a close similarity between the jerky speech and breathy tone of the stammerer and that of the normal child while learning to speak; if then, by stammering we mean stumbling over words, then all small children may be said to stammer while learning to speak. Since 1 per cent. of children develop a stammer there must be a determining physical factor which causes the breakdown; it seems that excessive speed is the cause. That this is the correct solution is indicated by the fact that in almost every case the stammer is decreased by speaking slowly.

Some boys can run more quickly than others, and no amount of training will make a slow mover into a sprinter. Some people cannot write quickly and no amount of practice will make them do so. Similarly, there are children who cannot speak quickly and it is the attempt to do so which causes the breakdown in co-ordination. The stammerer as a small child goes through the stumbling stage in the mastery of his speech, but whereas the others overcome the stumble, he continues to do so, becomes conscious of his failure and apprehensive of more failure, with the result that a vicious circle is formed and the habit of stammering is gradually established. Long experience as well as the statements of stammerers and their parents shows that speed is the determining physical factor. Speaking slowly lengthens the vowels and facilitates the use of a full vocal tone, the neglect of which is the cause of the intermittent breakdown, as has been explained above.

This brings us naturally to the consideration of the fear factor in stammering. That fear is the determining psychological factor is proved by the fact that all stammerers can speak fluently when alone, but whether fear is the cause or the result of the stammer has for a long time divided speech therapists into two definite groups. Those who have made a study of the voice and its production realise that vocal tone must be the predominant factor if speech is developed on correct lines. They recognise a stammer as a failure to co-ordinate correctly the speech factors, so that consonant formation wrongly becomes the predominant factor and therefore vocal tone, which is the essential factor in all speech, is intermittently "smothered."

In the ranks of the neurologists and psychologists, on the other hand, there are many who hold the opinion that a stammer is merely a symptom of nervous disturbance, to which the child has a hereditary tendency, or which has been caused by shock, fright or illness. It is, however, interesting to note that opinion is once more divided and that some of the leading neurologists and psychologists agree with the voice producers that stammering is a habit of incorrect speech, resulting in intermittent breakdown, and that the stammer is the cause of the fear and anxiety. To quote but one example, Dr. Henry Devine, O.B.E., ex-President of the section of Psychiatry of the Royal Medical Society and ex-President of the Neurological Section of the British Medical Association, evidenced his complete agreement with my definition of a stammer and my method of correction, by adopting them *in toto* and without any remarks of his own in his contribution on stammering in the 1936 edition of the *Medical Annual*.

It is interesting to note that at the time when doctors regarded the theory and practice of speech therapy as part of their work, the explanation of the stammering habit and the method suggested for its correction were similar to those described in this article. Writing in 1851, John Bishop, F.R.S., F.R.C.S., says: "The most common cases of stammering occur when persons attempt to articulate the desired sounds without putting the glottis into vibratory action; and, therefore, in order to remove this kind of impediment, the treatment consists in instructing and exercising the patient in the method of using the vocal apparatus properly." In 1879 E. B. Shuldham, M.D., says: "The patient cannot adjust the mechanism of speech with sufficient art, so as to produce continuous, uninterrupted sounds." In 1883 William Abbotts, M.D.,

defines a stammer by quoting the words of John Bishop (1851). In 1889 A. G. Bernard, M.R.C.S., L.R.C.P., writes, " Stammering is occasioned by the disorderly and unnecessarily accentuated efforts of the stammerer to articulate " and " the slower and more deliberate his articulatory efforts, the more perfect they will be. In singing, where the movements of these parts are slower, and the notes are sustained, stammering rarely, if ever, occurs." In 1894 John Wyllie, M.D., F.R.C.P., says, " Stammering is in the great majority of cases due to delayed action of the laryngeal mechanism " and " All this tends to show that when a primary demand for voice is made, as in song, the difficulties of the stammerer can be made to disappear " and " A general injunction to the stammerer, that in speaking, he should employ a full tone of voice, is always of use to him." In addition to the above another book deserves special mention, first because it was the work of Lennox Browne, F.R.C.S., in collaboration with Emil Behnke, a teacher of voice production, secondly because it has reached its twenty-third edition! Published first in 1883 the definition in this book is given thus : " Stuttering is a fault of co-ordination between articulation and vocalisation." It is of special interest to note that these writers considered that faults in respiration were at the root of the trouble. Many speech therapists and teachers of voice production have concentrated on the teaching of deep breathing to increase vocal tone, but it is now more generally recognised that for speech the quality of vocal tone depends rather upon the accurate approximation of the vocal cords than upon an increase in breath supply. It is important to remember that the force that produces the vibration must be in proportion to the vibrator ; to increase the force without increasing the vibrator and its resistance serves no useful purpose. The truth of this is indicated by the fact that the leader of the Queen's Hall orchestra does not use a double bass bow in order to increase the tone from his violin ! Again, the clapper of a bell must be in proportion to the bell ; to use a blacksmith's hammer to ring a small bell would improve neither the resultant tone nor the bell itself ! The erroneous idea that increase of breath supply produces an increase of vocal tone in speech is doubtless due to the fact that deep breathing and control of the breath are required for singing when the notes and phrases are much longer than in speech and the singer may have to sing to the accompaniment of a full orchestra. We are considering vocal tone in speech for which increase of vocal cord resistance is required rather than an increased breath supply. As we have already seen, there is a correct balance between breath supply and vocal cord resistance ; as the resistance is increased the breath is automatically regulated. Thus, although the opinions expressed in Browne and Behnke's book are not in absolute agreement with those of the other writers, the actual difference is comparatively small, inasmuch as they describe a stammer as a fault of speech rather than a symptom of a general condition of nervous disorder. With this slight qualification it may be said that among the doctors, with the exception of those employed in public appointments other than hospital appointments, stammering has been looked on for the most part as a bad habit of speech, which can and should be corrected through speech re-education, and that this opinion has been consistently held for the last eighty-six years, since we find that the medical books of reference accept the same definition as can be seen in the Index of Treatment, 10th and 11th editions, as well as the *Medical Annual* whenver an article on stammering has been included in the edition, for instance in 1934 and 1936.

Miss Freda Parsons, whose speech training is so well known and deservedly appreciated in the Midlands, agrees that stammering is a habit of inco-ordination of the speech factors, and that the speech breakdown reacts mentally, thereby causing anxiety and fear. In her recent book, " The Gateway of Speech," she points out that speech is a muscle habit, and that *any individuality of speech is also a muscle habit.*

When, however, we turn to " The Nature and Treatment of Stammering " by Dr. Boome and Miss Richardson, in which they describe their system of speech correction as used in the L.C.C. Speech Clinics, we find that stammering is described as merely a symptom of a condition of nervous disturbance. These writers assert that, owing to the apathy of the medical profession, the treatment of stammering is mainly in the hands of quacks and charlatans. In actual fact there are speech clinics under the supervision of the medical staff at several of the London hospitals ; in order of seniority these clinics have been in existence for 25, 24, 18, 14 and 12 years, and there are at least half a dozen of more recent creation. That the L.C.C. method is not ideal is indicated by the fact that, although the ground is theoretically covered by them, the hospitals have found it necessary to increase the number of hospital speech clinics.

These writers assert that stammering is caused by a neuropathic tendency with an hereditary proneness to stammering or an inborn liability to nervous disturbance due to instability of the nervous system ; they consider that fright, shock, illness or strain may be considered as secondary or determining factors.

In the chapter entitled, " The Stammerer's Point of View," one paragraph is of particular interest, especially when it is compared with the earlier part of this lecture. The stammerer writes : " A great help, I find, is to listen to the quality of one's voice, instead of the actual words ; to try and attain a pleasing intonation, and, if you like, acquire certain mannerisms from other people. For instance, I found that I could manage better if I spoke with a Scotch accent, or better still with a drawl. But, of course, the only lasting and complete source of help is in relaxation, although only a stammerer knows how terribly difficult that is when speaking." It is difficult to understand why it is considered to be more advantageous to learn relaxation, which the stammerer himself describes as " terribly difficult," than to rely on the imitation of well-balanced speech until it becomes a habit.

On the subject of correction these writers say : " One hears *ad nauseam* of methods based on the need for re-education of speech . . . the teacher ignoring the obvious fact that a stammerer is already obsessed with the mechanism of speech, and that he needs to be led *away* from, and not *towards*, his obsession." If this is sound reasoning it would seem that coaching in cricket and lawn tennis is valueless ! Observations, however, make it clear that the lawn tennis player who plays his shots off his wrong foot and without full use of his shoulders, will improve his game by learning the correct co-ordination of wrist, arm, shoulder and foot-work, and that as his game improves by coaching so will his self-confidence increase. It is logical to suppose that the muscle habit of speech will also be improved by mastering correct co-ordination and that confidence will be increased thereby.

The writers continue : " The originators of these methods appear to have overlooked the fact that the neurosis causing the stammer is also causing the muscular hypertonicity which results in an unnatural voice, and that once this tension has been conquered, the patient is usually found to have quite a good voice of his own." The writers have overlooked the fact that the voice producer knows that the stammerer has " quite a good voice," which has been smothered by hypertonicity of the muscles of the throat and neck, and his efforts to form into words vocal tone which intermittently fails to function. His efforts are to teach correct co-ordination so that the " good voice " may take its correct predominant position as a speech factor. Every singing pupil has to overcome hypertonicity, and he is taught to do so by learning to use correctly the muscles which are required, in the case of the stammerer the hypertonicity is merely present in a greater degree, so that instead of the tone of the voice being spoilt as in the case of the untaught singer, in the case of the stammerer the voice is intermittently " smothered " by the effort to articulate the consonants.

When comparing the explanation of the stammering habit given by Dr. Boome with that of other speech therapists, it may be presumed that his conclusions are largely based on his study of the histories of L.C.C. school children, who provide an ideal type to substantiate his theory that shock, fright and illness are determining factors of stammering. Many of these children may be said to live in an atmosphere of fear ; if, then, fear is indeed a determining factor, it is surprising that stammering is not found more frequently than it is among these children.

It is difficult to arrive at an accurate comparison of the L.C.C. method with the methods used in the hospitals, for it must be remembered that the L.C.C. method is compulsory ; the children who come to hospital are generally sent by their head master, who seems to prefer the short time which can be given to each case in hospital to the two long sessions per week at the speech centre. It should also be remembered that the L.C.C. treatment is free, so complaints are naturally rare ; nevertheless, quite a number of children are brought to hospital by their parents, who consider that the two to four years required by the L.C.C. method is unreasonably slow. As far as the children are concerned, this method attracts the lazy child who enjoys the welcome change from the routine of school subjects to the study of complete relaxation. Transport to the speech centre by special ambulances is an additional attraction.

It is very difficult to form an accurate estimate of the value of the remedial work of a body such as the L.C.C., which has the advantages of comparatively unlimited powers, supply of cases and time.

Turning now to the important questions of development and expansion of speech therapy, the L.C.C. have the full control of what might be and should be an ideal training organisation, inasmuch as they have an ample supply of patients, a large choice of suitable premises and last, but not least, sufficient funds to pay for reasonable alteration and expansion. But while there is no difficulty in grouping any number of students round a table on which is lying a stammerer who is stated to be in a state of complete mental and physical relaxation, it is very difficult to persuade a stammerer, even after he has been shown how to use his voice, to speak freely before an audience of students. The fact remains that speech therapy in the hospitals, where simple and direct methods are

employed, is increasing and that many children attend hospital clinics in preference to the speech centres provided by the L.C.C., although my experience as a former schoolmaster convinces me that mental relaxation appeals very strongly to the average boy! I might go so far as to say that much of a schoolmaster's time is spent in stirring his pupils out of mental relaxation into mental activity!

In view of these facts it would seem only fair and just to the children, their parents and the ratepayers that the L.C.C. should make some use of the methods which have enjoyed the continued approval of those in charge of the hospitals and which are accepted by the medical profession as a whole as reliable and sound. The correction of stammering through speech training is quick and effective; within a month it is obvious whether it is going to benefit the patient. If this system were used in some of the speech centres, many children would be saved the disappointment of being told, after three or four years, that correction by relaxation was unsuited to their particular cases.

At the present time opinion with regard to speech therapy is divided, not, as we might suppose, between the psychologists who attribute the disorder to fear and the voice producers who consider that the fear is caused by the stammer, but between those speech therapists who are attached to the section of the medical profession employed in the Government and municipal services and those attached to the rest of the medical profession engaged in general and special practice. Until there is some exchange of opinion and a willingness to consider and try other methods it can hardly be claimed that the best that can be done for the stammerer is being done.

Some Strange Practices

A Paper read before the Dental Society, Guy's Hospital, by D. L. Goodridge, Esq.

MR. CHAIRMAN and GENTLEMEN,—We dentists are inclined to live in a world of our own, and have little conception of the mind of the layman, educated, or only partially so. It is difficult to believe that few people know for certain the number of teeth that are in their heads; even Aristotle said man had more than woman.

We should try to understand how other people act and think in connection with dentistry. I have therefore tried to find out what I could about the dental practices of some of the more primitive races. In view of the ignorance of our people it is all the more amazing that the natives in uncivilised parts attach so much importance to the question of order of eruption. In some African tribes children who have the misfortune to erupt their upper incisors before their lower are put to death. Infants who are born with embryonic teeth are immediately put to death by the mother or midwife. Again, in Madagascar the baby is taken out and dumped in the forest, having been first smeared with the juice of a wild plant which is considered a delicacy by the white ant.

Supernumerary teeth, however, are never noticed—or possibly never occur—and there are no reports of any curative treatment for anyone so afflicted. These are the only rites that have been found in connection with pure dentistry, as opposed to bastard dentistry, such as non-therapeutic extraction mutilation, about which this paper is mainly concerned. Of course, this is excluding removal of teeth which have become unbearably painful, which is done by a sympathising friend with a wooden elevator or a chise and mallet.

Fig. 1
Rivetted wire in position.

Fig. 2
Appearance of emblems on buccal surface of normal teeth.

Mutilation and extraction of good teeth occur in a few well-defined areas in the world : parts of Australia and Central Africa, the Hawaiian Islands, and in Borneo. These are all totemic races, but it is to be noted that the Red Indians of North America, also totemic, do not practise any such custom. Sir John Frazer, who has gone very closely into the subject of totemic races, does not consider that there is any connection between the complicated system of life and marriage under the totem and the rites of extraction and mutilation. I think that it would be as well to discuss the aspects of this subject under the distinct geographical areas in which they occur.

The Dyaks of North Borneo disfigure their anterior teeth as they approach puberty, and in their view the white square teeth of the civilised man are considered a disfigurement. Man can never resist the temptation to try to improve on Nature. The upper incisors of the Dyaks are ground to sharp points, or level with the gums, in one or more operation, with a hard stone, sand and water,—and, with the coming of civilisation, with broken saws or watch-springs. The witch-doctor, at the ceremony, places the patient's head on a concave block of wood and files V-shaped notches between the teeth. Perhaps a few years later, another operation takes place, in which the teeth are further pointed or even ground flat.

The object of grinding the teeth level with the gum has perhaps some connection with the use of the blowpipe for hunting. It is surprising, says Kanner, that there is no exposure of the pulp during the rough-and-ready operations, but this is probably due to the lapse of a few years between the two ceremonies, and the consequent laying down of secondary dentine.

Here it is interesting to note the report of Dr. Ginistet, a French dental surgeon, which, in the *Revue de Stomatologie* of 1930, states that he found in examining the teeth of Senegalese soldiers, who practise mutilations, that complications such as granulomata, fistulæ, cysts and abscesses were common. The teeth appeared healthy and a good white colour, but were not vital.

The mutilations were done by heavy blows with a chisel and mallet, and the apical vessels were probably ruptured. Caries was rare, perhaps due to rubbing the teeth with bone splinters. The complications were slow to develop and were not noticed by the natives. He also noted a wide median diastema, which he believed to be hereditary in many Senegalese families.

The Dyaks also blacken their teeth by covering them with a resinous substance made of several wood resins and of coconut shells burned together. Kanner states that the idea that the chewing of betel nut stains the teeth is erroneous; it merely turns the mucous membrane a brilliant red.*

Fig. 3
Appearance of emblems on buccal surface of mutilated teeth.

An additional custom is the inlaying of the teeth with copper, brass, or gold, in the shape of half-moons or other symbols. This is done by boring a hole through the crown of the tooth, passing a wire through the hole, and riveting it home by flattening the lingual surface and carving the flattened buccal surface.

All these ceremonies occur at the age of puberty, and marriage is never thought of until they are undergone. In the East Indian Archipelago the operation of circumcision is undertaken at the same time. This fact should be borne in mind when we consider the Australian aboriginals.

In Australia we find that some tribes practise extraction and some circumcision, but never do both occur in any one tribe. It is reasonable to suppose that the two operations are interchangeable, according to custom, or even the whim of the witch-doctor. This is due to the curious conception of puberty in the primitive mind.

At first sight it seems that the initiation rites of tooth removal and circumcision have this common feature, namely, the removal of a part of the body. A likely theory, rather diffidently brought forward by Frazer, is that both ceremonies were intended to promote the reincarnation of the individual at a later date by severing a vital, or especially durable, portion of his body and subjecting it to treatment most likely to be of assistance in bringing him back to life after death.

It is important that we should understand that the conception of puberty by the aboriginal is something the highly educated Western mind

* This statement may cause a storm of protest, but I think that the reason of the misconception about this fact is that the majority of observers have been laymen who have put down the superficial staining of tartar with the juice as an intrinsic stain permeating the tooth substance.

cannot grasp. This fact should be remembered when we attempt to understand that a woman of Central Australia may place no interpretation on the act of copulation, and may have no idea of the necessity of the male in the generation of children. This is reasonable when it is considered that the woman is ignorant of her pregnancy till a " stirring in the womb " occurs, when she is already about four months pregnant. We must remember that the Australian aboriginal is the most primitive representative of mankind, and is quite unable to think of any greater period of time than about ten days; any further time is merely a confused blur. This stirring is usually connected with something which may strike her fancy at the moment, such as a bounding kangaroo, a flashing parakeet, or the glinting of the sun in a glade. So it is this mysterious moment in her life, joined with some passing thought, which is identified by her as the planting of the spirit of the child within her. It will be realised from this how difficult it is for us to understand what puberty means to the native mind.

The usual practice after extraction or circumcision is to hide the removed part in some place unknown to the initiate. The hiding-place is often under the bark of a tree, and in one tribe, the Unmatjira, it is hidden in the grove of trees where the women are supposed to conceive through the entry into the womb of the disembodied spirits of previous men.

On the borders of South Australia and Northern Territory, the rite is not compulsory for the youths at initiation, but it is voluntarily undergone by men and women at times of drought, or at the end of the rainy season. It is often found that teeth are linked with the bringing of rain. This is an example of sympathetic magic, the connection being between the tears of agony and the falling of rain.

In the Hawaiian Islands, the extraction of teeth is performed as a sign of mourning on the death of a chief. (We can compare the custom of blackening the teeth of Japanese widows.) It is not enforced, but it is so common that few men are without serious losses in their dentition, even to the extent of causing speech defect. Captain Cook, who first recorded it, suggested that it was not so much a question of grief as of a means of propitiation of the evil spirits, or for the provision of the departed with the ability to eat in the next world. Again, there is an analogy with the provision of corn for the dead, as found in the tombs of the Pharaohs of 2000 B.C.

In Africa, the custom of filing the teeth is met with in many tribes of Central and Western Africa, notably amongst the more northern Bantus and the inhabitants of the Upper Nile, or Nilotic races such as the Gours, Nyam-Nyams and Dinkas, whilst the Ashanti break out the teeth of their war prisoners.

Choice or custom seems to determine what actual teeth are extracted. The upper and lower incisors are the most frequently operated on, probably because they are so much easier to get at! These customs are practised by both sexes, although mainly by the men, or, more accurately, by the youths, since the operation is undergone at the age of puberty, and certainly before marriage, even if that ceremony be postponed as late as the twentieth year. The reasons for the custom in Africa seems to be varied, and can be enumerated as follows :—

1. Self-adornment.
2. Punishment.
3. Initiation into manhood.
4. Endurance of pain.
5. Tribal identification.
6. Mourning.
7. Custom.
8. Freedom from military service.

Mutilation for the last-named reason was formerly common in the French colonies, notably the Senegal, where there was a form of conscription. The incisors were removed, so that the intended conscripts were unable to bite off the cartridge for the old flintlock guns. This was, of course, before the introduction of the percussion cap cartridge.

As a punishment by the Ashanti the custom is sufficiently self-explanatory. The Nyam-Nyams of the Upper Nile practise a cruel mutilation of cutting off the upper lip, the genitalia, and, to safeguard themselves from the retaliation of a very dangerously cross man, the hands of the prisoner. The victim shows a very similar profile (facial) to a patient with a bilateral harelip.

As a sign of mourning it seems doubtful whether the operation occurs at all in Africa. Many natives, on inquiry, answered that their forefathers had it done before, which, to them, is a sufficiently strong argument for its continuance.

It is only in a few Central Australian tribes that it can reasonably be conjectured that initiation is a solemn ceremony, " without which no young person can be considered grown up." Closely connected with this is the custom as a means of proving manhood by the endurance of pain.

As a tribal identification, it is interesting to note the various forms of mutilation as practised amongst each village of various tribes, and it seems that, within limits, it depends on the fancy and skill of the witch-doctor. However, it is the chevron shape which is most commonly met with. Both Burton and Speke, explorers of the last

century, state that the dentitions have every appearance of the reptilia or crocodilia, and assume that it is intended to be such.

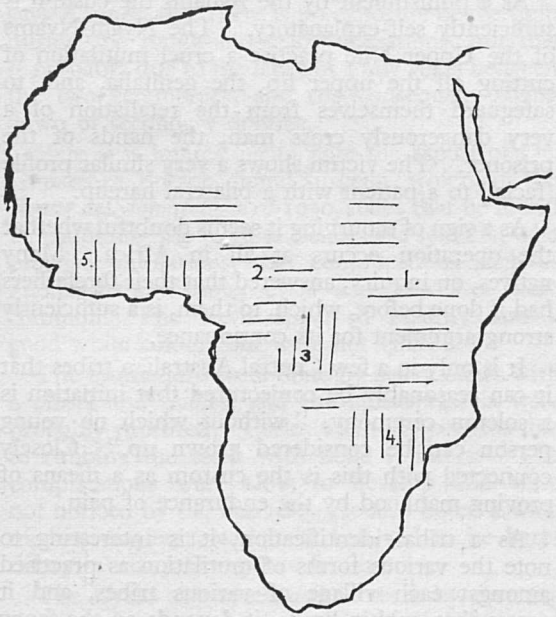
The extraction of teeth is said by some to be an imitation of the oxen, which are venerated. David Livingstone said the Batoka of East Africa "when questioned respecting the origin of the practice, reply that their object is to be like oxen, and that those that retain their teeth they consider resemble zebras." Yet again, East Uganda races say they resemble the donkey. This hatred of the zebra is in spite of the very high esteem in which they hold its flesh. This deification and vilification of animals has probably a strong link with totemism.

As a question of self-adornment, this has become purely a matter of custom, strengthened by various beliefs, and the true reason for mutilation is lost in antiquity. The beliefs which the natives hold to bolster up the practice, especially among the Masai, are that an uninitiated man will certainly die in battle; he would certainly die also if his wife had not undergone a similar operation, and that she would probably be unfaithful to him in his absence. The native admiration of the mutilated mouth is such that without it marriage is as difficult as for a woman with strabismus.

In connection with this, the Gours, on being asked why they practised these customs, replied, "Why do you remove the beard and hair that God has given you and denied us?"

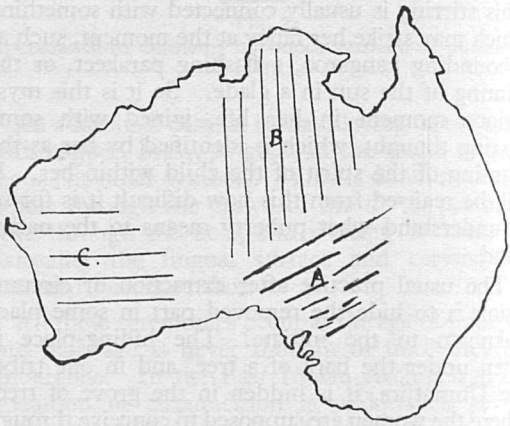
Perhaps the nearest we can get to the reason for these customs is the theory that it is done as a sacrifice. But to whom or why the sacrifice is made is not known.

1. Nile River Watershed.
2. Niger Watershed.
3. Congo Watershed.
4. Zambesi Watershed.
5. West Coast Rivers Watersheds.



Compulsory extraction.
Voluntary mutilation.

A. Darling River Watershed.
B. Watersheds of Inland Rivers.
C. West Coast Watersheds.



Compulsory extraction.
Voluntary extraction.
Alternative extraction or circumcision.

These illustrations come from the report of the Wellcome Tropical Research Laboratories of Khartoum, and are the work of Captain Anderson. He speaks of the Gours, Nyam-Nyams and Nilotic races mainly. (The word Nyam-Nyam is an onomatopœic word reminiscent of their cannibalistic tendencies.) The teeth involved are incisors or canines, maxillary and mandibular. The operation is performed on all males at puberty, and is often carried out voluntarily on the females. For extraction, a gouge or chisel is prised between the incisors and levered until they are loose enough to be removed with the finger and thumb. The pointing and filing is done by an expert, who chips with a chisel and a heavy stone to the required rough shape and then polishes the broken surface with another stone. Separating the teeth is also done, by inserting pegs of wood of gradually increasing size.

The reasons given by the author are:—

1. Tribal distinction.
2. State of manhood.
3. Ornamentation.
4. Differentiation between man and animals.

The Dinkas say that it is necessary for the pronunciation of their langugage, but it is more likely that their language is a result of the extractions. The Nubas also give an interesting reason—that a very sick man or those suffering from lockjaw, which is very common in that district, can be fed more easily. On the other hand, some say that it is to look fierce, to bite and tear meat better, or to show their cannibal proclivities.

The teeth after removal are nearly always perforated and hung on a necklace or waistbelt, to preserve life and to render the wearer more potent sexually. We must compare the Australian natives who hide the tooth in a cache to ensure the continuance of the race.

I have carefully avoided a succession of meaningless names of tribes who practise these customs, and the individual teeth removed in subdivisions of different tribes. Neither have I gone at all into the actual ceremony itself, and its multiple variations, but the following broad principles of its conduct are interesting.

The initiates are carefully guarded and undergo an intensive preliminary training for a fortnight. Everything is done to promote secrecy from the other sex, for not only the youths, but also the girls, go through some preliminary initiation. Throughout the novitiate there is an attempt to build up a climax for the final day, by carefully increased excitement, and making the novice physically and mentally tired. He has to undergo long-distance runs, and feats of strength to the point of exhaustion, and he has to dance until he can no longer stand. These dances may even go on for so long as four days. The evening before the day of ritual the youths may sit round a huge fire until their hair is scorched, and their condition is that of extreme prostration. Here there is a comparison with several Red Indian tribes who include in their initiation rites endurance tests in steam-heated tents.

On the day of the operation the rite is begun amidst great noise and excitement, with drum-beating and singing. Dances of an erotic nature are started, though whether these are treated as such or are merely a matter of custom it is hard to know. Further mention will be made of this later.

The initiates are placed across the chest of an elder, or even sometimes sitting on the shoulders of a man kneeling down. Blood, after the operation, is never wiped off, and must be allowed to drip on the bodies of both youth and bearer and there allowed to dry. Throughout the operation the novice is in a state of priapism.*

* This fact seems to be doubted by some authorities, arguing that the novice is too physically tired to take any interest in his surroundings and that, being in this exhausted state, is in no way able to show any emotion or feel any pain.

After the rite has been undergone, wood-ash is rubbed in the wound, and the newly created man is segregated until it has healed; then he is free to join the elders' council and to find a wife.

Evans-Pritchard, in a paper read before the Anthropological Institute in 1929, states that at times of great stress, physical and mental, there is a unanimous relaxation of all tribal modesties and moral conventions.

He calls these "prescribed obscenities," and gives as examples of occasions for the loosening of morals when natives are worked at forced Government labour, or when mourning the death of a chief, or at the initiation of youths. The "obscenities" take the form of sexual suggestions, erotic dances and songs, and sometimes promiscuous intercourse for all who desire it without the usual consequences of such conduct.

This is all the more amazing in view of the fact that the aboriginal, in settled times, is abnormally modest. I think this compares with the similar loosening of morals among civilised races when at war, or at any time when men are forced to work under hard conditions or in uncongenial circumstances.

The nature of some of the practices in another paper were such that they were discreetly described in Latin and Greek. The idea of these things taking place at a funeral or an official mourning party is, to the Western mind, most incongruous.

The author's explanation of these indecencies introduces us to a very nice train of thought. He says: "These occasions of emotional stress are fraught with great danger both to the individual and to society. The pent-up emotion . . . reaches a point where some activity is essential; unless this activity is guided into harmless channels it may prove to be fatal to the individual and disruptive to society."

One variation of this rather interesting ceremony is undergone by the girls of an African tribe who, after being circumcised and having had a tooth removed, throw the tooth backwards over the shoulder into the village waterhole, and then smear themselves with mud and immerse themselves in the water. This is believed to secure an adequate water supply for the next dry season.

These customs vary, of course, a great deal, and in parts of Africa there is little or no ceremony in connection with either extraction or circumcision. The operation is undergone as simply and as naturally as a haircut would be in more civilised parts of the world.

Evans-Pritchard also states that the operation of circumcision and extraction, in many African tribes, is a matter of purely personal totemism. It is not so much a rite as a personal affair between

one's totem and oneself, and is done to ensure a life in the hereafter. It might be described as a "Totemic Confirmation." The operation is performed by the father of the candidate, in the privacy of the family hut, and is of no significance to the rest of the tribe.

It is impossible to sum up a subject like this, where all is fact, and where that is so small that all theories can be but guesswork. We can only say that there is some connection between the sexual and dental customs of the Australian aboriginals; that the link is becoming lost in the African tribes, and that it is entirely missing in the East Indian Archipelago; whilst the customs of the Hawaiians are of a religious nature only.

I hope that I have not made this very intriguing subject too dry and matter-of-fact, but I have enjoyed very much delving into various interesting books, and I believe that you would find it far more amusing to start some reading in this branch of ethnology than in performing some of your own strange practices.

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Correspondence

Head Injuries

To the Editor of the GAZETTE

SIR,—In the paper in your last issue upon "The Indications for Operation in Head Injuries," certain important sequelæ of operation have escaped mention. These are the symptoms which result from the cranial defect after decompression, and which persist after the patient has recovered from the direct effects of his accident. He is apt to suffer from local discomfort and giddiness, on stooping or on exertion, which render him unfit for active exercise or manual labour. Such disability, when it occurs, is usually permanent.

As a contra-indication to operation, the risk of such sequelæ is, of course, of small weight when there is reasonable ground for suspecting epidural or subdural hæmorrhage. When, however, the purpose of operation is to relieve increased intracranial pressure due to contusion and œdema, and so improve the ultimate prognosis, we may well pause to ask ourselves one or two questions.

Is there, in fact, evidence of intracranial pressure? Are the symptoms under observation of the kind which are known to be caused by increased intracranial pressure? What is the likely prognosis without operation?

I cannot in a letter discuss all the points raised by these questions, but I must protest against the view expressed in your paper that in the case of a patient showing irritability and delirium after a head injury, the discovery of a bloodstained cerebro-spinal fluid is an indication for operation. If this became the rule, I believe that hundreds of patients would suffer unnecessary harm. A blood-stained spinal fluid is found more often than not in cases of severe head injury. It proves damages to the meninges or brain. It is certainly not in itself an indication for operation.

The state of traumatic delirium following head injury ends, as a rule, in complete recovery without operation. That there are exceptions to this rule must be admitted. In a small percentage of cases there are residual symptoms—less often residual disability. Whether in such cases the prospects of recovery might have been improved by decompression is open to question. If we may judge from the cerebro-spinal fluid pressure, many of these patients are not suffering from increased intracranial pressure at all. In those cases in which the pressure *is* increased, there is no correlation between the rise of pressure and the severity and duration of the symptoms.

The symptoms of traumatic delirium, confusion and automatism are probably due to direct injury to the neurons inflicted at the moment of the accident. If so, they are not likely in the least to be improved by operation.

Yours, etc.,

C. P. SYMONDS.

74, Wimpole Street,
W.1.

Reviews

Handbook of Diets. By ROSE M. SIMMONDS, S.R.N. Published by Messrs. Heinemann, Ltd. *Price 7s. 6d.*

THIS handbook needs no introduction to the nursing profession, and the second edition has recently been published. It contains a wealth of information in a compact form dealing with diet in health and disease. The essential constituents of a balanced diet with their sources and relative values are clearly given. The tables of Heights and corresponding Weights from American statistics provide a useful source of reference in a book of this kind. The lists of portions of food containing 5 grammes carbohydrate and 5 grammes protein are useful and comprehensive.

The section dealing with infant feeding, though brief, is sound, and is followed by diets for children. Among the many diseases catered for is a full account of the dietetic treatment of Diabetes. Alternate diets for gastric disorders are given.

It is questionable whether or no the original Lenhartz diet is prescribed now. Blum's diet has not been mentioned in the treatment of nephritis, although that suggested is similar.

This is essentially a reference book. It is practical and should prove invaluable to all interested in this important and controversial subject.

F. T.

Health and a Day. By LORD HORDER. Published by Messrs. J. M. Dent & Sons. *Price 7s. 6d.*

WE have here, collected by Lord Horder, a series of addresses delivered by him to bodies as different as the House of Lords and the Kansas City Women's Club.

The subjects treated show less diversity, and the author's concern is generally with trends of modern medicine and the doctor's place in the modern world.

A review of such a book demands a constantly shifting standard of criticism in that the author himself is modifying his approach according to whom he is addressing. It is not a book for doctors as doctors, but may be of some interest to them in that they and their doings are the subject of the book.

It is a modern habit for men of eminence in various professions to address themselves to the public in a vein sensibly different from that in which they address their colleagues, and not only in their mode of address different; their material is as varied. The ex-Dean of St. Paul's writing on Plotinus is very far removed from the *Evening Standard* Dean who comments weekly on current affairs, and the same can be said of certain well-known astronomers, while "on the air" one is constantly hearing the Great "talking down" to the level of the masses. This habit of literary condescension we believe to be of fairly recent origin. Certainly it is difficult to conceive of Dr. Johnson, for instance, modifying his address one whit in order to mollify his audience. It is a deplorable modern tendency which we find particularly irritating.

Lord Horder at his best could never be accused of this trait; his address to the House of Lords on Euthanasia (included in this volume) is masterly. He manages to skate over the thin ice of this difficult subject—saying very little, but implying so much that the most unenlightened peer must have understood which way his vote should go. In "The Clinician's Function in Medicine" and "Direct Action in Medicine" he provides a wholesome corrective to the habit of over-estimating the value of laboratory investigations—a habit which the patients even more than the physicians have adopted.

It is when the author deals with more general topics such as "The Strain of Modern Civilization" and "The Doctor as Humanist" that we find the faintest strain of condescension entering into his writings. His treatment of these subjects is so slight and his liberal use of well-worn quotations so frequent that one finds oneself hurrying on in the hope of finding something more solid "to get one's teeth into." He is not unaware of this himself, for in one and the same lecture he expresses the fear lest his reader should find him "sententious," "platitudinous," and "egregious."

We hope that we may have many more volumes from Lord Horder's pen, which is always witty and perceptive, but we would ask that he pays us the compliment in the future of his allowing us a longer and deeper look into his wise and penetrating mind.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Sport

Cricket

GUY'S v. MIDHURST

THIS match was played at Midhurst, and, after a very enjoyable game, Guy's beat Midhurst by 35 runs.

Batting first, we scored 303 for five by 3.30. The feature of this innings was a magnificent performance by Leeming, who scored 110 in 75 minutes. This was quite the best innings played this year, and one of our opponents went so far as to say that it was the finest ever played on their ground. His knock included 12 fours and 4 sixes.

G. H. G. Chase also batted beautifully for 80, and O'Gorman made 50 in 25 minutes.

Midhurst made a very good reply to our score, making 268. O'Gorman, bowling with great variety, took 6 for 117.

Scores.—Guy's, 303 for 5 declared (J. A. L. Leeming, 110; G. H. G. Chase, 80; G. O'Gorman, 57, not out). Midhurst, 268 (T. Lees, 51; K. Quascohen, 69; O'Gorman, 6 for 117).

THE CHANNEL ISLANDS TOUR

ON the night of July 24th, a Hospital cricket team sailed from Southampton for the Channel Islands carrying seven regular members of the first XI, the best of the second XI, and Alastair Kinloch, of St. Thomas's Hospital.

In Jersey we were immediately successful, defeating Victoria College by ten wickets, and All Jersey by an innings and 141 runs. In these three days of remarkable cricket many strange things happened: J. A. Leeming completed his third hundred of the season; C. L. T. McLintock, finding his captain in a doubtful condition and extorting a most unreasonable promise, opened the innings against Victoria College and scored his first and only hundred, and a very good innings it was; A. M. Platt scored 101 in 55 minutes—a notable feat against any class of bowling. But perhaps more remarkable still, R. A. B. Kinloch took all ten wickets in Jersey's second innings, including a "hat trick," which he later paid for dearly.

If we found fame on the cricket field we made history off it. One "Angus," of happy memory, raised up a cocktail in our name, and to this day it is advertised in blue and gold, "Guy's C.C. Special Cocktail, High Temperature." For the benefit of others we print the ingredients :—

1/3 Latvia Rye Vodka.
1/3 Bacardi Rum.
1/3 Cerasella.

We recommend this to the palate of every Guy's man more particularly in the words of one of our more distinguished students, who likened it to a "dose of 5 c.c. of Evipan."

Taking a sad farewell of Angus, for Angus was a very great man, we sailed on Thursday for Guernsey.

Here we defeated the Commercial League in a one-day game fairly comfortably, but inevitably falling away, lost to All Guernsey by 80 runs after leading them on the first innings.

G. H. G. Chase and J. A. Leeming, our two most successful batsmen, showed consistently good form here, the latter in particular triumphed over countless difficulties and proved himself a very good cricketer indeed.

Mention should perhaps be made that the captain here took it upon himself to introduce a penalty cap for bad fielding, an abomination in blue and white muslin. The honour of wearing this fell fairly evenly between himself and the vice-captain. The ubiquitous Chase, plodding wearily in the deep, mysteriously avoided this same honour.

On Saturday, 31st, the tour ended and that night we sailed for England, a little sadly, for never had we found such hospitality nor such pleasant cricket as in Jersey and Guernsey, to whom, God willing, we shall return.

GUY'S v. VICTORIA COLLEGE

On Monday, July 26th, Guy's beat Victoria College by 10 wickets, Victoria College, 194 for 7, Guy's 270 for 2 (J. A. Leeming, 125; C. L. T. McLintock, 133).

GUY'S v. ALL JERSEY

Guy's won this match by an innings and 141 runs.

Scores.—All Jersey, 129 (Kinloch, 4 for 33) and 73 (Kinloch, 10 for 26).

Guy's

J. A. L. Leeming, c. Carey, b. Geary	0
G. H. G. Chase, b. Nobes	35
L. G. Morey, b. Geary	83

P. H. Birks, c. Carey, b. Geary	35
H. D. Foster, l.b.w., b. Geary	5
R. A. B. Kinloch, c. Richardson, b. Geary	4
C. L. T. McLintock, c. Richardson, b. Geary	5
T. H. Eustace, c. Dupré, b. Campbell	50
A. M. Platt, b. Campbell	102
J. M. Warner, c. Carey, b. Nobes	0
G. C. Sprigings, not out	7
Extras	16
Total	343

GUY'S v. COMMERCIAL LEAGUE

On 29th July, Guy's beat Commercial League by 27 runs.

Scores.—Guy's, 165 (J. A. Leeming, 40; T. H. Eustace, not out, 28). Commercial League, 138.

GUY'S v. GUERNSEY

On July 30th and 31st, Guy's lost to Guernsey.

Scores.—Guernsey, 144 (Morey, 5 for 28) and 253 (C. F. Grieve, 77).

Guy's

(First Innings)

J. A. L. Leeming, l.b.w., b. Rich	66
G. H. G. Chase, c. and b. Grieve	67
L. G. Morey, b. Grieve	1
P. H. Birks, l.b.w., b. Grieve	6
T. H. Eustace, st. Reddish, b. Grieve	2
H. D. Foster, b. Rich	1
A. M. Platt, l.b.w., b. Rich	13
G. C. Sprigings, b. Rich	8
J. M. Warner, b. Grieve	0
C. L. T. McLintock, not out	12
A. L. Young, b. Rich	0
R. A. B. Kinloch, b. Grieve	5
Extras	5
Total	186

(Second Innings)

J. A. L. Leeming, c. Rich, b. Grieve	31
G. H. G. Chase, c. and b. Lewis	15
L. G. Morey, c. Grieve, b. Rose	1
P. H. Birks, l.b.w., b. Lewis	0
T. H. Eustace, l.b.w., b. Lewis	2
H. D. Foster, b. Rich	17
A. M. Platt, b. Lewis	11
G. C. Sprigings, b. Rich	11
J. M. Warner, b. Grieve	18
C. L. T. McLintock, c. Mead, b. Rich	0
A. L. Young, c. Rose, b. Rich	10
R. A. B. Kinloch, not out	0
Extras	14
Total	130

GUY'S v. OLD MID-WHITGIFTIANS

GUY'S met the Old Mid-Whitgiftians at Croydon on Tuesday, August 10th, and won by 19 runs.

Guy's

J. A. L. Leeming, c. Skinner, b. Feldwick	49
C. L. T. McClintock, c. Skinner, b. Leech	31
H. A. Thomas, b. Pearce	25
A. M. Platt, c. Defoe, b. Leech	8
O. G. Lane, b. Leech	25
P. H. Birks, b. Feldwick	12
G. O'Gorman, b. Pearce	29
A. Henley, b. Leech	0
J. M. Warner, c. Mansbridge, b. Feldwick	5
G. C. Sprigings, c. Green, b. Pearce	3
R. A. B. Kinloch, not out	1
Extras	12
Total	200

Old Mid-Whitgiftians

Mansbridge, c. Leeming, b. Platt	40
Bolwell, A., b. McClintock	55
Skinner, c. Warner, b. O'Gorman	0
Defoe, c. Leeming, b. O'Gorman	8
Feldwick, b. Platt	40
Green, l.b.w., b. O'Gorman	0
Daniels, b. O'Gorman	0
Fuller, c. Platt, b. O'Gorman	3
Saville, b. McClintock	3
Leech, c. Sprigings, b. McClintock	24
Pearce, not out	2
Extras	3
Total	181

Platt, 2 for 54; O'Gorman, 5 for 54; McClintock, 3 for 29.

Hospital Information, etc.

Notice

GUY'S HOSPITAL MEDICAL SCHOOL DIPLOMA IN ANÆSTHETICS

A Course of Instruction in preparation for the November Examination for the Diploma in Anæsthetics of the Conjoint Examining Board in England will commence on October 18th. The Course will cover a period of three weeks and will include lectures in Physiology, Anatomy, Pharmacology, Clinical Investigations and Anæsthetics.

The Course will be open to men and women graduates. The fee for the Course will be £15 15s. 0d.

Further information may be obtained from the Dean, Guy's Hospital Medical School, London Bridge, S.E.1.

Pass List

SOCIETY OF APOTHECARIES OF LONDON. FINAL EXAMINATION.

August, 1937.

Surgery.

J. D. Buckner. W. A. Groom
J. B. Good W. E. Young

Medicine.

*A. A. Beazeley *K. G. Pascall

Forensic Medicine.

*A. A. Beazeley *K. G. Pascall

Midwifery.

A. Backman D. C. Light
H. B. O. Cardew

* Have now completed the examination.

Papers by Guy's Men

E. Sayle. Normal and abnormal cerebro-spinal fluids. *Jour. Clin. Res.*, 1937, xxiii, 96.

Ronald E. Smith. Cervical myalgia in adolescents. *Clin. Jour.*, 1937, lxvi, 330.

A. H. Harkness and Another. Gonococcal pyonephrosis. *Lancet*, 1937, ii, 375.

S. J. Hartfall. Some experiences with a concentrated whole-liver extract. *Lancet*, 1937, ii, 317.

Frank J. Pearce. Valedictory address. *Brit. Dent. Jour.*, 1937, lxiii, 136.

W. A. Mill. Basal-celled carcinoma of the palate. *Dent. Record*, 1937, lvii, 392.

T. A. B. Harris. Anoxia in anæsthesia. *Brit. J. Anæsth.*, 1937, xiv, No. 4 (July).

Kenneth Pringle. Results of early extraction. *Dental Record*, 1937, lvii, 483.

T. F. Todd. Pathways and relief of pain in advanced carcinoma of the cervix uteri. *Lancet*, 1937, ii, 555.

A. Ralph Thompson. Urinary disease associated with nervous disease. *Practitioner*, 1937, cxxxix, 285.

W. H. Bradbeer and Another. A case of otitic hydrocephalus. *Jour. Laryngol. and Otol.*, 1937, lii, 624.

John A. Ryle. Experiment and experience. *Brit. Dent. Jour.*, 1937, lxii, 257.

A. Ralph Thompson. Hypospadias: Its effects, symptoms and treatment (with diagrams). *Lancet*, 1937, ii, 429.

R. W. B. Ellis. Cranio-facial dysostosis (Crouzon's syndrome). *Proc. Roy. Soc. Med.*, 1937, xxx, 1187 (Sect. Study of Dis. of Childr.).

George T. Hankey. Two cases of osteomyelitis of mandible. *Ibid.*, 1244 (Sect. Odontol.).

Guy's Hospital Reports.

July, 1937, Vol. lxxxvii (Vol. xvii, 4th Ser.), No. 3.

Contents.

E. B. Strauss: The psychogenic factor in asthma.

R. A. Q. Lay: An obsessional psycho-neurosis in a boy of twelve—the use of play-technique.

R. C. Brock, R. J. Cann and J. R. Dickinson: Tuberculous mediastinal lymphadenitis in childhood; secondary effects on the lungs.

I. G. Robin and W. N. Mann: Carcinoma of the trachea.

Sir Arthur Hurst: Melanosis coli.

Robert M. Kark: Two cases of aplastic anæmia.

Martin A. Rushton: The dental condition in cleido-cranial dysostosis.

P. M. F. Bishop: Studies in clinical endocrinology—II. "Habitual abortion," Its incidence and treatment with Progesterone or Vitamin E.

W. H. Bradley: Epidemiology of streptococcal infections.

Changes of Address

E. C. Hughes, 62, Wimpole Street, W.1. *Welbeck* 8984.

Marriages

KELSEY—FLANAGAN.—On July 28th, 1937, at Lady Margaret Church, Walworth, Heneage Marchant Kelsey, M.B., B.S., M.R.C.P., to Maureen Josephine Flanagan.

COLE-MORGAN—ROCHE.—On August 4th, 1937, at Pennard Church, Glam., W. J. R. Cole-Morgan, L.D.S., R.C.S.(Eng.), to Miss Vivienne Roche, The Dunes, Pennard.

MOLL—WHITE.—On August 14th, 1937, at the Parish Church, Gillingham, by Rev. Canon Webb, Edward L. Moll, L.D.S., R.C.S.Eng., to Rhona Mary White.

Eds. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

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PASSIM

WHEN Professor Johnston was appointed Superintendent of the Hospital it was cause for much speculation by one and all as to who would be his successor as Dean of the Medical School, and this speculation was not mere curiosity, for it was realised by the Staff and students alike that on this choice depended in a large measure the future well-being of the Hospital as a teaching institution, and the continuance of those harmonious relationships so necessary between one and all which may derive from an intelligent generalship in the Dean's office.

Whether anyone "picked the winner" we do not know. We certainly did not, and in retrospect we realise that this was due to the fact that whereas we were seeking amongst names and titles of eminence in the medical and surgical world, the real problem lay in finding the necessary qualities, and not the necessary titles. That these have been found in the person of Mr. T. J. Evans, the new Dean, we have not the smallest possible doubt, and we hereby extend our heartiest congratulations to him on his appointment and to the Governors on their excellent choice.

We have postponed comment on this appointment for some weeks in the hope of providing some review of Mr. Evans's career as a distinguished biologist. In this we have been thwarted at every turn by his native modesty. This much we have discovered—he was born in a small village in Wales, and spoke no English until he learnt it in the local school. He obtained an Art Scholarship at Aberystwith University, and was later an Exhibitioner in Natural Sciences at Jesus College, Oxford. On leaving Oxford he was appointed Oxford University Biological Scholar at the Zoological Station at Naples, where he was for several years. He was later Lecturer in Biology at Sheffield University, and in February, 1914, came to Guy's as Lecturer in Biology, where he has been ever since.

Of Mr. Evans's achievements in Biological fields we are not qualified to speak. If they are in proportion to his mental gifts they must be very great indeed, for he is the possessor, as all who have known him will bear witness, of that exceeding rarity—an absolutely first-class mind, and one, moreover, which has not confined itself to one narrow field. Science, the arts, modern literature, the classics, music, Egyptology—there is not a subject on which one may not obtain enlightenment from him, and about all he has that sense of balance which one can term common sense, not of the drab dull variety, but one which is illumined at all times by a lively Celtic imagination and a keen wit.

We count ourselves fortunate in having him for a new Dean.

▭

MUCH has been written lately, and no doubt a great deal more said which could never be written, about the conditions under which nurses work to-day and of methods for altering both these and also the whole system of nursing education. In July of this year we read of a conference, the influence of which, we were lead to believe, was world-wide, and which devoted much of its time to this subject. The matter has been discussed freely in weekly papers, before having such shreds of sensation which may be sifted from it flung across the headlines of the dailies, but last week we read of what is perhaps the most sensational step of all in the fight to alter existing conditions, namely, the attempt on the part of the nurses themselves to form some sort of trade union.

Apparently a group of nurses, representing several of the larger London hospitals, and who feel no longer able to tolerate the conditions under which they are asked to work, have formed themselves into a kind of executive committee, which is inviting nurses all over the country to air their grievances and join their union.

The list of evils of which the luckless girls were reported as having complained, in an account given in the *News Chronicle*, were both varied and amusing. Some revolted against a perpetual diet

of lukewarm hash (the expression, if not the dish, seems vaguely familiar), while others complained of the deadly monotony of only being allowed nine articles on their dressing-tables, but, most dramatic and soul-stirring of all, were the poor wretches who are locked in each night behind an iron grille; that must be a horrid place.

In general, however, most of the grievances dealt either with food or minor restrictions of liberty, and to us it seemed that most of them could easily be overcome with comparatively slight adjustments, but the idea of a trade union is one which, if strongly supported, may lead to far-reaching consequences, and "stay-in strikes," "lock-out strikes," "pickets," "wage agreements," "hunger marches," and all the rest of the weapons which are used by union workers to enforce their wishes, may yet enliven the tedium of our daily work in hospital.

All the same we feel that the idea of nurses banding themselves together into some sort of union to protect their own interests is a good one, and indeed we marvel that the poor defenceless wretches had not thought of this step before.

Nursing is perhaps the most exacting profession in the world, and, apart from the great sacrifice of time for the benefit of others, it may call for judgment and patience of the very highest degree, and it has always seemed to us not a little wonderful that in this rather material age of ours there appear people who are born with these qualities and who are willing to devote a lifetime to nursing.

That there are, however, there is no doubt, and for such women we have a profound admiration, but there are not, and there never will be, enough of these born nurses to deal with the whole of the illness in the world, and in our own modest and inexperienced view, one of the greatest difficulties of the nursing profession to-day is the problem of training girls who have no intention of nursing for any length of time, and who are merely using the profession as a temporary means of employment. Under such circumstances the work must necessarily appear more arduous, and such nurses are to be admired little less than their more inspired colleagues, for, lacking the natural incentive which springs from a life's ambition to nurse, the performance of uncongenial tasks and the laborious acquisition of facts must at times seem overpoweringly tedious.

However, there is no denying that the temporary nurse is quite essential for the existence of hospitals, so that the problem of their education and training must be faced, and in this connection we have often felt that their burden might be eased by some slight relaxation of the mass of red tape and petty restriction surrounding their activities, which surely must have outgrown its usefulness and which we feel sure would have amazed some of the free-thinking pioneers of this noble profession; by the abandonment of educational methods which would be an insult to a senior boy at a preparatory school, and by ceasing all attempts to treat as children people who, nominally if not mentally, are almost grown up. With this end in view we feel, perhaps, a trade union, if sanely legislated, and when the first wild flights of hysteria have worn off, may prove a valuable weapon of criticism for the nursing profession as a whole.

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SINCE we wrote in the last number concerning the regrettable delay in the adoption of any kind of plan as to the reconstruction of the Children's Ward and the alarming rumour that the whole question might again be shelved, and nothing done until the time and money had arrived for the erection of the new Surgical Block, we have received letters from readers expressing the deepest concern lest this rumour be founded on fact.

For ourselves, we hope sincerely that it is not, and can see very little advantage to be gained from the children being housed in the proposed new Surgical Building, where their legacy might easily be swallowed up in expenditure quite outside their own particular needs, more especially when it is remembered that such a scheme would mean an inevitable delay of at least five years.

Moreover, since the last issue we have been asked for advice whether, since the whole project seems in danger of relapsing once more into obscurity, such money as has been subscribed especially for the Children's Ward will ever show any result, and one reader even went as far as to ask our advice with regard to withdrawing her subscription, which she now suspected of having been wasted.

Such letters would be more easily answered if there was some reasonable hope of the work of reconstruction being begun and we could point to some definite plan that had been approved.

▭

BY a welcome twist of fashion and an increase in the price of tin, super-streamlining on motor cars is not so evident to-day as it was a year or so ago, and the type of body which looks as if it had been heated to redness and then stretched by some giant hand, in the way that we puny mortals pull chewing-gum off the bed rail, seems to be much less common, we are glad to say.

However, no matter what is the prevailing fashion in cars, people will always be found who are ready and willing to exceed the speed limit, and we understand that "gonging" is again all the rage in the West End this autumn. Mild epidemics of flatfootedness have also occurred on the Embankment from time to time lately, where, we understand, the receipts in fines from that newly erected avenue of traffic lights have fully

justified all expectations, but mere fines seem such commonplace punishment after the picturesque sentence which, so we read, was passed in America recently on a man convicted of dangerous driving.

This unfortunate man was sentenced by the Judge to attend his local church every Sunday for a year, listen attentively to each sermon, and then return to the Court each wek and recount such lessons as he may have learnt. Indeed a frightful penalty, and we assume that the usual plea for mercy had been rejected, though in one sense the miserable man might feel a slight ray of comfort, for no fixed sum seems to have been stipulated for him to put in the collection, but to us the whole idea of the sentence seems to savour of a preparatory school.

Others argue, however, that the idea of compulsory worship as a penitence for mechanical misdemeanours is a good one and might be adopted with advantage over here, but so far magistrates seem to have neglected the spiritual side of the question, and, as far as motorists are concerned, it is just a case of " to what red 'ell."

ELSEWHERE in this number, we publish an account of a cricket match which was played recently at Reigate on behalf of the Appeal Fund.

Among those taking part were many eminent cricketers, and we have received, unfortunately too late for publication, a most interesting photograph of the two teams. Copies of this photograph, however, are on sale at the Appeal Office in St. Thomas's Street, and the price is half a crown.

The Complications of Herniæ in Relation to Treatment

By A. J. Grace, Esq., B.A. (Sask.), M.A., B.M., B.Ch. (Oxon.), F.R.C.S.

THE term " hernia " may be defined as the protrusion of some normally enclosed structure or structures through a breach in the containing wall. Many varieties are recognised, but for the purposes of this discussion herniation of abdominal contents alone will be considered. Any boundary of the abdominal cavity may be involved, including the diaphragm and pelvic floor; the commoner types occur through certain well-known " weak spots " of the anterior abdominal wall. True herniæ consist of a sac of peritoneum enclosing variable portions of the more mobile viscera, particularly the intestines and omentum. False herniæ have no sac.

The complications include two broad general groups of conditions. In the first place, any disease may co-exist with a rupture and constitute an " associated condition." The recognition and proper evaluation of all such maladies is an essential step in determining the right care of each case. True complications owe their origin to the hernia itself, and comprise morbid states of the sac, coverings and contents, and certain conditions of structures elsewhere, as still within the abdomen, in the scrotum, etc.

Following this brief introduction, a word may be said concerning my choice of subject. Of conditions met with in general surgical wards of any hospital hernia stands second in regard to numbers of cases; it is met with repeatedly by all practising medical men. The correct treatment of each case calls for judgment and decision, while the choice of treatment in many cases is dictated by the presence or fear of complications. Oftentimes some complication will demand urgent interference; in such instances the primary consideration is effective relief of this feature, which is likely to threaten life, perhaps leaving the cure of the hernia itself to a more favourable occasion. A simple hernia may cause its host some annoyance and discomfort *per se*, but it will not endanger his life apart from its complications It appears to me that the sole absolute indication for operative treatment of simple herniæ is that this is virtually the only certain method of preventing the development of serious complications. It is to be noted that practically all deaths from herniæ are due to the complications. It has been wisely stated that the correct time to begin treatment for surgical shock is before the condition develops; how forcefully the parallel statement applies regarding the urgent states that may arise from a simple hernia.

The LOCAL COMPLICATIONS of external herniæ call for consideration in some detail, and will be discussed forthwith.

INFLAMMATION is recognised, apart from the other local complications, but the term is now seldom used. Localised peritonitis of the sac is usually meant by this term, the inflammation commonly originating in some content of the sac; rarely the source is acute inflammation of a contained appendix, as in the case of a right femoral hernia upon which I operated the other day. Occasionally external trauma is a factor, occasioned by use of a truss, efforts at forcible reduction, or blows; sometimes an unhealthy condition of the overlying skin forms the starting point. Inflammation of a hernia predisposes to adhesion formation and more serious complications; it is

frequently found along with the other complications to follow. Like these it is particularly prone to occur in herniæ of the femoral and umbilical varieties.

IRREDUCIBILITY is typically due to adhesions; these may join various contents to each other or to the sac wall, or different parts of the sac together. Other factors include the size of the neck of the sac, and sliding herniæ which are often irreducible. Old and long-standing herniæ are those generally affected. The condition is liable to portend changes of greater gravity (v.i.).

INCARCERATION or OBSTRUCTION of a hernia refers to mechanical interference with the flow of materials through the intestinal lumen without any significant vascular obstruction. In its pure form this condition is rare, and it occurs especially in cases of involvement of the colon, the solid or semi-solid matter of which requires a roomy conduit.

STRANGULATION involves circulatory interference, at first at least limited to the venous side; the tissues show gross engorgement with de-oxygenated blood in the early stages, while eventually gangrene supervenes. A large or medium segment of bowel is affected where a large vessel, or several vessels, are blocked, as in the mesentery; at the opposite extreme one finds direct pressure necrosis of the gut wall affecting the most minute and localised areas, notably in femoral herniæ of the Richter's type. The immediate cause of the vascular block varies from case to case. Resistant structures about the hernial orifice, or thickening of the neck of the sac, may be responsible; or else there may be a variety of intra-saccular factors, as adhesions, twists and unusual contents.

Strangulation is a complication of such tremendous importance that it is proposed to return to this subject in greater detail later in this paper.

Certain *rare complications* of herniæ call for no more than passing reference. TORSION OF THE OMENTUM may arise in the sac, in the abdominal cavity, or as a combined type. I have seen one fatal case of VOLVULUS involving practically the entire ileum; this followed reduction of a long-standing right inguinal hernia in an elderly man. The mesentery was grossly elongated—no doubt a predisposing factor. RUPTURE OF THE BOWEL in a hernial sac may result from external violence, or from ulceration or gangrene within; formation of a fæcal fistula is an uncommon termination of such cases resulting in a natural cure of sorts. Various morbid changes may arise from the pressure effects of tense hernial sacs upon adjacent structures, such as the scrotal contents, the femoral vein, etc. It is impossible even to mention all the conditions reported at various times as complications; nor is it possible in the time at our disposal to discuss each type of hernia individually regarding the incidence of the different complications.

INTERNAL HERNIÆ merit mention, although not truly falling within the scope of this paper. Herniation may occur into the various fossæ about the duodeno-jejunal flexure, about the cæcum, into the intersigmoid fossa, into the foramen of Winslow, through gaps in the mesentery, and into a number of even rarer sites. This group of conditions has been described at length by Moynihan. The clinical manifestations are not distinctive, being indicative of intestinal obstruction, usually acute, but less frequently subacute or recurrent. Every case of possible internal hernia demands urgent hospital supervision and investigation, with a view to laparotomy, under the best possible conditions, to deal with whatever be found.

Many rare forms of herniæ present special features and problems. Among such the following constitute the commoner varieties: diaphragmatic, obturator, sciatic, lumbar, perineal. In the main our considerations apply to the usual types of external herniæ, viz., inguinal, femoral, umbilical, incisional and epigastric. With appropriate modifications the remarks on complications will hold good for the other varieties.

The question of TREATMENT OF HERNIÆ offers considerable scope for individual selection. The exact choice is influenced by many details, as the age of the patient, type of work, accessibility to civilisation, past history, general health, and the size, variety and special characters of the particular hernia. The different methods calculated to cure or control external herniæ will be described separately. Inactivity or a failure to adopt some definite policy in handling each hernia case is justifiable only under exceptional circumstances.

MECHANICAL MEASURES for supporting herniæ have been used since antiquity, starting with bandages and pads and leading up to the modern improved trusses, so popular with sufferers who are loath to undergo operations. Such measures are *curative* only in the case of small herniæ of the inguinal and umbilical varieties in children under four years of age. A reasonable prospect of success demands that adequate support be instituted within the first two years of life, be maintained at all times, day and night, and be persisted in on an average for not less than two years. Success is not certain even with careful selection of cases, and with careful supervision throughout. An apparent cure may be followed by recurrence in later years. The best results attend combination of a light, well-fitting appliance with measures directed to avoid undue strain on the hernial region, *e.g.*, restricted diet, prevention

of coughing and constipation, and rest in bed (with the foot elevated in case of inguinal herniæ) either continuously or at least fourteen hours every day. Such procedures, combining external support with reduction of the intra-abdominal pressure, have been reported to yield favourable results in as high as 95 per cent. of cases (Ochsner).

In an adult a truss is never curative; at best it is a makeshift, and merely *palliative*. It is really suitable only for patients with reducible herniæ not considered favourable for more active treatment, or for those who can be trusted as well as constantly supervised. Accurate fitting is essential, as also detailed instructions regarding use, care of skin, etc. The dangers must be pointed out, while the appearance of certain symptoms is to be considered ominous. The patient must be prepared for life-long reliance upon his truss, and for some degree of irritation, annoyance and perhaps physical discomfort attending its prolonged use, especially in hot weather. The effects of long-continued truss pressure upon the hernial contents, the sac, and the surrounding tissues may be deleterious in the course of time in various ways. A truss that fits imperfectly, or one that is liable to slip, provides a very real menace. The fundamental role of an accurately fitted truss in connection with the injection treatment of hernia will be noted later.

TAXIS, or manipulative reduction of herniæ, has a place in connection with those of the irreducible type, and in very early cases of incarceration and strangulation. It must never be attempted in advanced cases where great danger exists of rupturing the damaged gut, of reducing gangrenous bowel, or effecting "reduction *en masse*," of tearing the mesentery or sac wall, or causing other mischief, while letting efforts at taxis divert attention from the only means of curing the condition. If taxis be undertaken, it must be tried systematically. The affected part of the body should be elevated for some time, and the abdominal muscles must be relaxed. Preliminary administration of morphia is always wise, as well as local application of an ice-bag. Some advocate giving concentrated magnesium sulphate solution per rectum in the belief that this leads to diminution of the œdema of the neck of the sac as part of the general dehydration. These measures should be employed for about two hours, and they are occasionally successful alone. Then taxis proper is commenced; gentle, uniform pressure is exerted on the swelling in an effort to reduce the œdema of the tissues first of all. Reduction is attempted, starting with the portion of contents that appears to have descended last, *e.g.*, the posterior part in the case of most inguinal herniæ.

It will be evident that the place of taxis is restricted to early cases, and never after six hours of suspected strangulation. It is truly indicated only where early operation is impossible, or if surgical aid be stubbornly refused. Efforts are not permissible for a longer period than five minutes, and then only after adequate preparation. Success is attained in inguinal herniæ more frequently than in the other types.

OPERATIVE METHODS constitute the only certain means of *curing* a hernia (at least temporarily!), as well as the sole effective manner of relieving the dangerous complications. In general it is accepted that incarceration or strangulation demand prompt operation. The operative details must be suited to the particular findings. I feel strongly that safety calls for use of no anæsthesia other than local or regional infiltration. The first essential, ever to be borne in mind, is that the least procedure necessary to save life is to be carried out as expeditiously as possible; after that the matter of whether or not a radical cure of the hernia may be attempted with safety at the one operation must be faced, and decided on the merits of the case. Where any trace of doubt exists, the wise surgeon stops when assured that he has saved a life, and before progressing to the point of jeopardising the whole in his concern for the integrity of its part.

In uncomplicated herniæ operation is advised for the sole purpose of restoring the part to its *status quo ante* in so far as one can. It is desired to spare the patient the danger of his hernia enlarging and becoming strangulated, and to avoid the annoyance and uncertainty attending constant use of a truss. In every individual case the risks of operation must be weighed carefully against those entailed by other forms of therapy. It is sometimes true that there is a greater measure or responsibility attached to our advice against operation than when we urge the opposite if the small but definite risk of operation be deemed justifiable, I feel that we are in duty bound that the soundest possible job be made of the repair. A deplorable amount of sloppy surgery goes on in regard to herniæ, and the actual recurrence rate is much higher than need be, and than is generally recognised. I urge that it should be the rule rather than the exception that fascial repairs be done in the majority of cases—particularly in the common inguinal herniæ of working men. However, the operation must be suited to the needs of the patient, and routine use of a single method is to be strongly condemned. Familiarity with a range of approved techniques is valuable,

enabling the operator to select that one product of ingenuity best fitted to the conditions in hand. I have had some little experience with eight different operative procedures for the repair of umbilical and incisional herniæ.

To recapitulate, in simple herniæ it is important to do enough at operation to cure permanently the condition; in complicated herniæ it is essential not to do too much, and in curing the hernia kill the patient.

Lest too much importance be attached to the operation itself, the invaluable place of pre-operative measures must be appreciated for certain cases. It has been understood only recently that large, long-standing herniæ, where the contents have lost their "domicile" within the abdomen, require a preparatory period of rest, local pressure to replace the contents in the abdomen, and attention to the general health. Several weeks may be needed, but in uncomplicated cases this is quite possible, while being a small price to pay for the additional safety and the added prospect of a successful repair. Active treatment must not cease with the last stitch, but it must be carried through the hospital period and beyond until full rehabilitation is obtained.

The INJECTION TREATMENT of simple herniæ has lately met with some popularity in the United States and elsewhere. Many types of fluid have been tried, starting with drastic agents which set up an exudative inflammatory reaction. The modern preparations produce a proliferative, fibroblastic response. Tannic acid is a usual basis. Several commercial solutions are now available, and are said to be non-toxic and non-irritant. The method takes time, during which fibrosis is building up a barrier to descent of the hernia. The general scheme applies only to reducible herniæ where vigilant truss control is maintained throughout treatment. Numerous injections are called for, each being placed exactly and systematically, until the response is adequate. The technique is not easy, neither is the method wholly free from danger, nor is it as certain as radical operation.

Encouraging results are being reported frequently from extended trial of this method. It is an ambulatory form of treatment, and therefore eminently suited to elderly patients who wear trusses already, and in whom post-operative complications are to be feared. Hospitalisation and loss of time are unnecessary—outstanding economic advantages. With careful usage the risks are undoubtedly less than those of operation, making the procedure applicable to bad-risk cases and persons with chronic chest complaints, coughs, etc. The recurrence rate is claimed to be lower than that obtained by most surgeons.

Let us return to the subject of STRANGULATION, a serious complication found especially in old, irreducible herniæ, but occasionally occurring in a so-called "acute hernia." Unsuspected localised strangulation is commonly found in herniæ of the Richter's type (particularly femoral), and cries out for proper care. I well remember, as a student, seeing a case of this type operated upon; the autopsy findings three days later left an indelible impression upon me regarding both the dangers of this complication, even when minutely localised, and the menace of slip-shod surgery.

Strangulation of a hernia, the usual termination of the other local complications, is a condition of real gravity, and calls insistently for immediate relief. It is the condition above all that brings a hernia into the category of "surgical emergency." The patient is often gravely ill, showing evidences of severe toxæmia, shock and acute intestinal obstruction. Other complications are likely to ensue, either synchronously, in the local region or abdomen, or subsequent to operation, as internal hæmorrhage, perforation of the gut and peritonitis, or fibrosis and stenosis.

The mortality from strangulated hernia has been reduced little during the years of the present century. This is as sad as it is true! I shall seek, in a general sort of way, to draw attention to certain factors underlying this pathetic state of affairs, and to indicate some possibilities for improvement. The fault lies in part with the *patient*, who has become familiar with his hernia, and with infrequent exacerbations of trouble there, and in his ignorance, or stupidity, he refuses to appreciate the malevolence of its designs. He procrastinates. I shall never forget my first case in point; he had spent two days in bed vomiting "filthy black stuff" before even consulting a doctor; his gut was absolutely rotten, and he died. This story is re-enacted all too often. The lay public requires education.

The family doctor is not free from blame. It may be that he has made light of an ancient hernia, or has permitted or encouraged faith in an utterly ineffective mechanical contrivance. His sin may be one of omission, of failing to warn his hernia patients of the dangerous nature of the companion harboured, and that certain symptoms, either alone or in combination, are to be regarded as warning signals demanding immediate medical aid. Finally, when a case of early strangulation actually presents itself, valuable time may be lost because the complication is ill-understood, the gravity of the condition is not appreciated, or

ineffectual attempts at reduction by taxis may be prolonged to the point of increasing the damage. I have seen an instance of rupture of gangrenous intestine by forcible taxis, and another admission to hospital of a moribund patient with a neglected strangulated femoral hernia; her doctor had called daily for about a week, watching the swelling passively, and confidently reassuring the relatives. All members of our profession need wisdom, knowledge and judgment in dealing with herniæ at all stages.

Surgeons are often culpable also in regard to strangulated herniæ. The error is seldom one of diagnosis, for the wise surgeon acts on the assumption that the doubtful case is one of strangulation. The greatest mistakes are made in failing to adjust the operation to the individual requirements; in selecting a procedure beyond the recuperative powers of the patient. How rarely do we stop to think that any case of acute intestinal obstruction is invariably much more dangerously ill than he looks or feels. Instead of being content with doing the minimum life-saving operation, how often one attempts to complete the operative treatment of the damaged viscera, and perhaps even that of the hernia, at a single sitting. How much better to split up the operation into two or more successful stages than have one grand failure. We may rest secure in the view, "Better a living problem than a dead certainty." Let us realise that mistakes may airse from insufficient knowledge, lack of training, or failure to think before acting; let us be mindful that the health and happiness of a fellow human being are at stake, and even life itself.

Another point of importance in dealing with strangulated herniæ is anæsthesia. In my last year in England I operated upon twenty-four cases of emergency herniæ, mostly strangulated, with several instances of successful resection of gangrenous loops of intestine. I used infiltration anæsthesia invariably for all elderly patients and for all cases of strangulation of any duration even in the youthful. Comparison with patients treated differently by other surgeons has convinced me of the importance of local or regional anæsthesia as a routine for the primary operation. Recent surgical literature illustrates this conclusion, provided that one examines it sufficiently critically to ascertain that series subjected to different anæsthetics are strictly comparable. Too often "local" is reserved for hopeless patients. The avoidance of undue depression of blood pressure, post-operative vomiting and chest complications are most important, and are favoured by "local"; a little extra time is required, and greater gentleness in manipulations, but the results repay well.

After-care is all too often neglected. The operation should have relieved the strangulation, perhaps cured the hernia; it does not cure the ill person, who needs supportive measures of all sorts and care in countless ways. Post-operative complications must be anticipated and forestalled; it is unjustifiable to await passively the clinical onset of ileus, chest troubles, thrombosis, etc. The best defensive is an early and aggressive offensive. Many post-operative cases have an ample reserve to meet all contingencies; the post-operative strangulated hernia case needs every assistance we can give.

The Humoral Theory of Nervous Transmission

A Paper read before the Physiological Society of Guy's Hospital by D. R. C. Willcox, Esq.

MR. PRESIDENT and GENTLEMEN,—The humoral or chemical theory of nervous transmission suggests that the chemical substances which are found to be liberated at various cyto-neural junctions during the passage of impulses are themselves responsible for the stimulation of the cell. The idea is familiar enough to-day, but it must have needed considerable courage on the part of T. R. Elliott to suggest, as long ago as 1904, that adrenaline was produced at sympathetic nerve endings. He had demonstrated the remarkable similarity between sympathetic stimulation and injection of adrenaline, and had seen that the same effects of each were annulled by ergotoxine.

In 1906 Dixon, accepting the suggestion of a sympathetic transmitter, argued the probability of a parasympathetic transmitter, and he brought forward some evidence of its existence. He treated a heart with an alcoholic extract of heart tissue obtained after vagal stimulation and showed that this extract would produce slowing.

It was also in 1906 that Howell suggested that vagal inhibition of the heart was produced by an increase in the potassium ions concentration of the heart tissue. He showed that a large artificially induced increase of potassium ions caused the heart to stop beating and remain in systole.

In 1914 Dale showed that acetyl choline would produce effects when injected similar to parasym-

pathetic stimulation. This work, however, was not considered to be of any great significance, since acetyl choline was known only as a vegetable extract, and there was no evidence of its occurrence in the animal body.

Thus far there had been only suggestive evidence and speculative thought. The first decisive experiments were performed in 1921 by Otto Loewi. He perfused an excised frog's heart vagus preparation with oxygenated Ringer solution for some hours. Reperfusion in another heart showed that metabolic products had no effect. Reperfusion after only one minute of vagal stimulation, however, produced marked effects upon the heart rhythm. Sometimes an accelerator and sometimes a decellerator effect. This is due to the fact that the frog vagus contains sympathetic fibres, the accelerans. Loewi concluded that on stimulation two substances might be produced: these he called "Acceleransstoff" and "Vagusstoff."

It was soon shown that Acceleransstoff had many properties in common with adrenaline, but its actual identity has yet to be established. The question has been complicated by fresh evidence in Cannon's researches from 1931 onwards. Working on mammals, Cannon demonstrated the production of a chemical substance at post-ganglionic sympathetic nerve endings other than in the heart, which appeared to be identical with Loewi's Acceleransstoff. Cannon demonstrated the presence of this substance, which he called "Sympathin," as follows: Excitement and struggling for one minute produced a 100 beat per minute increase in the denervated heart of a cat. This was due to adrenaline delivered into the blood from the suprarenals. When the action of these glands was excluded, a smaller and more slowly developed increase was observed. If the spinal cord was divided in the thoracic region and the sympathetic chain removed in the anterior half of the animal, then stimuli causing struggling in the anterior half produced no effect on the rate of the denervated heart. But electrical stimulation of the posterior part of the cord sufficient to produce extension of the hind limbs was accompanied by the typical cardiac responses. This occurred so long as any part of the sympathetic chain remained in the body.

Next by peripheral stimulation of pure sympathetic fibres in the same preparation he showed that a heart accelerator substance was liberated into the blood. This substance, on analysis, proved to be similar to adrenaline. This was to be expected and quite in accord with Elliott's early suggestions.

However, in 1933 Cannon and Rosenbleuth showed that sympathin varied in its effect with its site of production. They used a decapitated cat injected with cocaine and curare and with the suprarenals tied off. Stimulation of either the lower splanchnic nerves, the duodeno-hepatic nerve, or injection of adrenaline produced an excitor effect, contracting the denervated nictitating membrane, and an inhibitor effect, relaxing the denervated uterus. But if the duodenal branches were divided so that only the liver was stimulated, the sympathin so produced would cause an excitor effect similar in degree with the foregoing, but no inhibitor effect at all. Rosenbleuth suggested the following explanation: A substance is produced at the nerve ending during stimulation, which combines with one or both of two substances resident in the effector cell. The combination of these substances causes the response and the products Sympathin E (excitor) and Sympathin I (inhibitor) pass into the blood stream to produce more diffuse effects. The value of this suggestion was diminished by the discovery that sympathin produced during the erection of hair in the tail—presumably excitor sympathin—would relax the muscles of the intestine. Bacq therefore studied in detail graphical records of the contraction of the nictitating membrane. He discerned two components, one of which he claimed was annulled by a certain dioxane derivative 933F. On this evidence he suggested both nervous and chemical transmission. Certainly there is chemical transmission of more general effect by means of sympathin diffusing into the blood, but whether the immediate response of the effector cell is wholly due to the action of a chemical transmitter is uncertain. So much for the part of the subject which developed from Loewi's discovery of Acceleransstoff.

It should be clearly understood that this part of the paper is somewhat disconnected from the following, for, although the sympathetic and the parasympathetic systems are in some of their actions antagonistic, there is no true antithesis between them. Indeed, the functional significance of the sympathetic system grows more obscure as knowledge increases. It is safe to say, however, that the sympathetic effects are of a general or co-ordinating nature, whereas the parasympathetic effects are specific. Subsequent paragraphs will show that this difference is attributable to the fact that the parasympathetic transmitter, unlike sympathin, is speedily destroyed. In passing, it is interesting to recall Cannon's statement that if the parasympathetic transmitter "were a persistent agent in the blood, it might bring about temporally related changes in biologically unrelated pheno-

mena." The Wellsian-minded may be able to visualise the implications of this statement, which have so far eluded the writer.

The study of Vagusstoff has produced results that are at once more definite and more far-reaching. In 1926 Loewi and Navratil made a comparison of this substance with acetyl choline. Both were destroyed by watery extracts of heart, liver and intestine. This was believed to be due to an enzyme present in these tissues, since heating or exposure to ultra-violet light of the extracts made them ineffective. Eserine was found to sensitise the heart to vagal stimulation, and to the action of both Vagusstoff and acetyl choline. This observation was particularly significant since other drugs which were known to imitate parasympathetic stimulation were not sensitised by eserine. Loewi had previously shown that the atropinised frog's heart always gave an accelerator effect on vagal stimulation. That is to say the effect of Vagusstoff was abolished by atropine, so that only the accelerans fibres were successful in transmitting their impulse. The effect of acetyl choline, they found, was similarly annulled by atropine.

So far, however, no Vagusstoff had been detected in the mammal heart, nor had any acetyl choline been definitely detected anywhere in the animal body. Both these difficulties were soon to be overcome, for, in 1929, Dale and Dudley reported the presence of acetyl choline in the spleen of the ox and the horse. Then in 1933 Feldberg and Krayer perfected a technique for the preservation of Vagusstoff in the mammalian body. Leowi had shown that acetyl choline was destroyed by an enzyme present in various tissue extracts. This enzyme was thought to be more active in the mammal and also to be present in the blood, so that Vagusstoff produced in the mammalian heart was destroyed almost immediately. Feldberg and Krayer discovered that eserine—the drug known to sensitise vagus action and acetyl choline injection—would prevent the destruction of Vagusstoff in the mammal. Eserine is presumed to produce this effect by inhibiting the cholinesterase which normally hydrolyses the acetyl choline. With this fundamental difficulty overcome Feldberg and Krayer preformed the following exact and important experiment :—

A cat was chlorolosed and given eserine, to preserve any Vagusstoff produced, and atropine, to prevent the circulatory changes accompanying the pevristance of the transmitter. The blood was rendered incoagulable. The vagi were exposed. The thorax was opened and a canula was inserted into the coronary sinus. The blood from the sinus was led away through a tube which could be tapped, and was returned to the external jugular vein. With this preparation they were able to draw off blood coming from the cardiac tissue at any time during the experiment without causing an appreciable disturbance to the circulation. Thus when the vagi were stimulated, the blood withdrawn would, owing to the presence of eserine, still contain Vagusstoff. The fluid so obtained was tested in the following way :—

1. It was found to have no effect on normal leech muscle suspended in saline.
2. It produced a marked contraction of eserinised leech muscle.
3. When injected into the circulation of a chlorosed cat it produced a fall in blood pressure.
4. This fall in blood pressure was abolished by the administration of atropine.

These are obviously results which might be obtained by using a solution of acetyl choline, and it is most significant that the ratio $\frac{\text{leech effect}}{\text{blood pressure effect}}$ is the same for acetyl choline as it is for the blood withdrawn after vagal stimulation. In fact, as far as judgment is possible with the present knowledge of pharmacology, this evidence cannot be explained except by admitting the identity of Vagusstoff with acetyl choline. It is justifiable, therefore, to speak henceforward of acetyl choline in place of Vagusstoff.

In the same year, 1933, it was shown that in the presence of eserine acetyl choline could be collected during stimulation at all parasympathetic nerve endings, *e.g.*, in the aqueous humour of the eye, in the submandibular gland, in the stomach and intestine. Thus it seemed that adrenaline was produced by post-ganglionic sympathetic nerves and acetyl chloine by parasympathetic nerves. But there were several exceptions, *e.g.*, vaso-dilatation of the buccal mucosa (a parasympathetic effect) was produced by the stimulation of the superior cervical sympathetic ganglion, and acetyl choline is produced by stimulation of the sweat glands whose innervation is (anatomically speaking) sympathetic. Dale therefore suggested that the division of the autonomic nerve system into sympathetic and parasympathetic was unphysiological, the true distinction being between adrenergic and cholinergic fibres. It was soon shown, however, that the production of acetyl choline is not confined to the peripheral nerve endings of the autonomic system. These actions of acetyl choline are due to those properties of the substance which are termed "muscarine-like," due to the fact that they can be imitated by muscarine ; these actions are annulled by atropine. But other properties of acetyl choline had been described, which, since they were similar to the action of nicotine on

autonomic ganglia and voluntary muscle, were termed "nicotine-like"; these actions are prevented by curare. It was the "nicotine-like" properties—together with some indirect but very suggestive evidence—which led to the detailed study of transmission in autonomic ganglia and at the junctions of spinal nerve endings with voluntary muscle.

Kibjakow in 1933 had reported that during stimulation of the superior cervical sympathetic, a substance was obtained which, if reinjected, produced stimulation of the ganglionic cells. At almost the same time Feldberg and Minz found that acetyl choline was produced at the terminals of the splanchnic nerve which supply the suprarenal medulla. Now the medullary cells, since they are innervated by preganglionic fibres, are analagous to ganglion cells. Feldberg and Gaddum in 1933, therefore, investigated fully the effect of stimulation of the superior cervical ganglion. They found that on stimulation of the preganglionic fibres acetyl choline was liberated; and that, on reinjection, the ganglion cells were stimulated. Finally, Dale and Feldberg were able to demonstrate acetyl choline in the outflow of perfusion fluid from the cat's paw and tongue during stimulation of spinal nerves alone, the autonomic fibres having degenerated.

That concludes the basic evidence upon which the chemical theory has been built. It makes evident the facts that acetyl choline is produced in the following situations :—

1. At parasympathetic nerve endings.
2. At certain nerve endings included anatomically within the sympathetic system.
3. Within the autonomic ganglia.
4. At spinal nerve endings in voluntary muscle.

It shows also that acetyl choline is capable of stimulating the appropriate adjacent structure in all the above cases. The theory combines these two empirical facts and states that acetyl choline so liberated during normal stimulation is actually responsible for the transmission of excitation from the nerve endings to the effector cell. This may seem a very obvious inference, but it is not a conclusion demanded by logic, and, indeed, it must be remembered that the Sherringtonian school continues to produce evidence indicating that transmission is satisfactorily explained on a physical basis; indicating also that the passage of the nerve impulse across the cytoneural junction is too swift to permit belief in the liberation and subsequent hydrolysis of a chemical mediator.

However, further evidence has been produced during 1935 and 1936 which gives a more definite picture of the chemical mechanism, and which helps to overcome the difficulty of the time factor. Much of this is in the form of graphs showing how closely injection of acetyl choline can be made to imitate actual stimulation. Feldberg and Vartiaiensen performed a series of experiments on the superior cervical ganglion, which they perfused, and studied the action of various drugs. The experiment involved the perfusion of the vagus ganglion as well, and this fact helped them to determine the exact site of the liberation of acetyl choline. They showed that no acetyl choline appeared in the perfusate during stimulation of the vagus nerve which suffers no synaptic interruption in its ganglion. Therefore it was concluded the nerve fibres themselves did not produce acetyl choline. Antidromic impulses passing backwards to the ganglion cells of the superior cervical similarly produced no acetyl choline. Therefore the ganglion cells were not responsible. This left the actual nerve endings as the only possible site of production.

They showed that the actions of the injected acetyl choline and of stimulation of preganglion fibres were both annulled by a large dose of atropine, and both reappeared after the same time interval as the alkaloid was washed out; that eserine sensitised both actions to the same degree, and that potassium ions could not only stimulate the ganglion cells, but also in subliminal doses sensitise the cell to subsequent acetyl choline stimulation. This is a particularly significant observation since even the Sherringtonians, in view of their knowledge of the nervous impulse, would admit the possibility of potassium ions affecting transmission. However, the effect is not potentiated by eserine to the same extent as is the effect of both acetyl choline and actual stimulation.

These two workers also made quantitative experiments. They calculated that about three million molecules of acetyl choline were liberated at each synapse by a single impulse. Confronted by this minute quantity it is less difficult to believe in the liberation and hydrolysis of acetyl choline within the space of the refractory period. Brown, Dale and Feldberg produced quantitative evidence of the contraction in voluntary muscle. They found that, when injected sufficiently rapidly, a dose of two gamma would produce a twitch of the same height as the response to a single electrical shock. Only .02 gamma could be collected from the perfusate, however, after stimulation by a single shock. This is a large discrepancy, but it is capable of explanation by the following three factors :—

1. The rapidity with which the acetyl choline reaches the end plates is the chief factor deciding whether or not a contraction will occur, and, with injections, the acetyl choline must diffuse from

the terminal arteries to the end-plates. Thus all the dose will not be effective.

2. The acetyl choline resulting from normal stimulation has to diffuse from the nerve ending into the circulating fluid, and much will be lost or left in the interstitial spaces.

3. The twitch, although resembling a normal twitch, is somewhat slower, and is believed to be a short asynchronous tetanus, due to the longer persistence of an abnormal quantity of acetyl choline at the end plates. That is to say the acetyl choline around the end plates is replaced as quickly as it is hydrolysed by the cholinesterase. This would not occur with the liberation of a smaller quantity of acetyl choline actually at the nerve ending, but it does suggest the high concentration of the esterase around the end plate and a lower concentration of this enzyme in the interstitial spaces. This, again, helps towards a belief in the speedy action of the enzyme, which is an essential part of the chemical theory.

That acetyl choline produced by normal stimulation is in fact destroyed by this means is indicated by the action of eserine on the intact nerve-muscle preparation. A single shock which would normally produce a twitch will, if eserine is present, give a repetitive response, which can only be explained by the persistence of supraliminial doses of acetyl choline at the end plates. Persistence of acetyl choline in the muscle will show a depressant effect, just as it did in the ganglion; and the fact that this depressant effect can be produced without eserine is further suggestive of a concentration of the cholinesterase around the end plates. In spite of the fact that Eccles denies the repetitive response with eserine, the evidence here recorded shows that the mechanism suggested by the chemical theory is at least not improbable.

The value of any theory lies in its application. If it can be applied to the related phenomena and give a reasonable explanation of them, then, until proof or disproof is forthcoming, it is worthy of study and teaching. The precise application of this theory is a matter open to dispute, but it seems that the following phenomena are adequately explained by the chemical theory, viz., forward propagation, delay, facilitation, summation and fatigue. The remaining paragraphs of this paper should be treated even more critically than the foregoing since they are largely the personal opinions of the writer.

The Law of Forward Propagation.—Eccles suggests that the successful nervous impulse, on arriving at the nerve ending, itself detonates the cell of the contiguous neurone, so starting a new impulse. If this be so, it appears difficult to explain why antidromic impulses arriving in the cell do not stimulate the nerve ending, for the fibres are quite capable on excitation of starting a nervous impulse. The theory of chemical mediators necessitates forward propagation since we know that the transmitter is liberated only at the nerve ending and excites only the effector cell.

Delay.—This is usually explained as the time taken for the impulse to overcome the so-called synaptic resistance, or for the c.e.s. to reach a threshold value. Much theoretical deduction is required to explain how the c.e.s. increases with time. The intermediation of chemical transmitters obviously requires time. Evidence that such a chemical mechanism can work within the observed period of the synaptic delay has been quoted above.

Facilitation.—The passage of the nervous impulse is believed to be concerned with a mobilisation of potassium ions on the surfaces of the cells through which it passes. Feldberg and Vartiainen have shown that potassium ions can sensitise the ganglion cell to acetyl choline. These facts, they suggest, can explain the facilitation which follows the passage of an impulse across the synapse.

Summation.—It is presumed that a subliminal stimulation produces insufficient acetyl choline, or produces it too slowly, to stimulate the muscle cell. If, however, due to repeated stimulation more acetyl choline is produced before all the previous dose is destroyed, then if the process continues the concentration of acetyl choline around the nerve ending will increase until the threshold is reached and stimulation of the muscle occurs. This is summation of stimuli. The whole process occurs before the depressant action of the acetyl choline appears.

Fatigue.—Here is another phenomena which seems inexplicable unless there is a special mechanism for transmission at the cyto-neural junctions, for it is difficult to believe either that a disconuity of fibre can be fatigued, or that the power of the nervous impulse itself is diminished. In the terms of the chemical theory fatigue can be explained by the failure of the cholinesterase to destroy acetyl choline, when the latter substance will persist and exhibit its secondary depressant action. The reason for the failure of the cholinesterase is not easy to see in the case of the synapse, but at the neuro-muscular junction it may well be due to the presence of lactic acid, since it is known that the activity of this enzyme is decreased in acid solution.

These few examples show that the chemical theory may soon be able to present a clearer picture of certain phenomena, which are at present difficult to understand. If it does so, then it will have justified its formulation, even though it remains unproved.

A Note on Keats

IT is almost certain that the sonnet in "Solitude" is one of the poems that John Keats wrote while he was a pupil at Guy's. It was the first he published and appeared on May 5th, 1816, in Leigh Hunt's *Examiner*, a weekly paper that came out on Sunday. By a deductive reasoning that seems to us conclusive, Mr. Middleton Murry* has fixed the date of writing it in October, 1815, during the first month that Keats was at the Hospital.

It begins thus :—

> "O Solitude! if I must with thee dwell,
> Let it not be among the jumbled heap
> of murky buildings;"

It is a cry from the heart of the London boy who has for ten years been living in the country. He had finished his apprenticeship and returned to London as a lonely student mingling with the crowd of Guy's and St. Thomas's men, of whom perhaps he knew no one. He was in diggings a few yards from the Hospital either in St. Thomas's Street or in Dean Street, which is now Stainer Street. The railway was not then there, nor were all the big warehouses that now lie east of the Hospital. We may imagine a network of little streets with cottage property extending beyond the "Ship and Shovel," perhaps as far as Horsleydown. Most of this has disappeared, but if one wanders around the back streets and alleys that lie between Maze Pond and the Tower Bridge Road one comes upon little masses of small houses that one feels sure were there in his time. They give us a mental picture of the Bermondsey of one

hundred and twenty years ago to which the description "the jumbled heap of murky buildings" fits exactly.

Some are so near the Hospital that anyone who has washed his—or her—hands at the basin in the windows of Naaman or Dorcas—which we now call Christopher—must have seen them. They lie just beyond the "Ship and Shovel" between Maze Pond Terrace and Little Maze Pond. A few weeks ago there was an exodus of the inhabitants. Then there was a boarding-up of all the windows. From these signs we diagnosed that they were soon to be demolished. We have therefore procured photographs of them from two aspects, that Guy's men—and women—may feel for the lonely student of long ago who prayed to Solitude :—

> "let me thy vigils keep
> 'Mongst boughs pavillion'd, where the
> deer's swift leap
> Startles the wild bee from the fox-
> glove bell."

* "Studies in Keats," 1930, pp. 3-6.

Correspondence

The Pupils' Physical Society

To the Editor of the GAZETTE

SIR,—Before the opening of a new season of the Pupils' Physical Society we wish to draw the attention of members to one point which we feel needs emphasis.

The Society is primarily for unqualified men in the wards, and its success and usefulness is dependent on them. Not only are the cases presented by them but the discussions should also be in their hands; these, in the best traditions of the Society, are spontaneous and outspoken, and the opinions often inspired rather than informed. The qualified men are always welcome, for their experience is helpful, but they expect to be treated on equal terms, and their presence must not cause any diffidence in argument or invective among the junior men, which we have noted of late. Last season the prize for the member "who most distinguishes himself in the demonstration and discussion of cases" was not awarded because the unqualified men, who alone are eligible for it, were overshadowed.

We look forward to the coming season to see this remedied and to hear once more the free give-and-take, both of words and opinions, however unorthodox, which was once such an enjoyable feature of the Society.

The opening meeting is on Thursday, October 7th, at 8.15, when Dr. R. W. Ellis will give an address on "Some Effects of War on a Civil Population." The full season's programme will be available at that meeting.

Yours, etc.,

S. H. WASS.
C. G. BAKER.
Hon. Secs.

Guy's Hospital, S.E.1.

Pulmonary Embolism

To the Editor of the GAZETTE

SIR,—Dr. Douthwaite's lecture on this subject in your issue of August 14th must have interested many old Guy's men besides myself. It was, however, with considerable disappointment that I noted the absence of any reference in his lecture to the widespread occurrence of thrombosis and embolism—at least in the West Country—during the past 16 months. At the beginning of April, 1936, I was called down to a large town in Somerset to investigate an outbreak of puerperal sepsis in one maternity hospital. There were seven cases, none of which resembled in any way the usual infection by the hæmolytic streptococcus, nor the fairly common B.C.C. type, nor did such investigations as could be carried out tend to suggest either of these conditions. On careful review of the whole series I formed the opinion that the outstanding feature of these cases was thrombosis, and premised some mild—possibly subclinical—infection of the community at large to account for the special tendency to thrombosis.

Since that time every possible type of thrombosis, frequently with embolism, has occurred in my own gynæcological and obstetric practice, and also in the practice of my surgical and medical colleagues. On one occasion, after doing an operation list of five cases on a Saturday morning, I found on the following Monday no less than three of these cases with typical symptoms of a small pulmonary infarct. Had this experience been limited to my own cases I should have suspected some failure in my own technique, but this was not the case. Thrombosis and *small* emboli have been the bane of medical existence in this part of the world for a period of about 16 months, and I should be most grateful to Dr. Douthwaite or anyone else who can shed light on such a curious—and painful—occurrence.

I do not recollect a fatal issue in the whole series of cases.

Yours, etc.,

DOUGLAS A. MITCHELL.
(*Gynæcologist, Royal United Hospital, Bath.*)

11, Circus,
Bath.

Sport

Cricket

THE "BEGGARS" XI *v.* A GUY'S XI

IN spite of extremely unpleasant and variable weather, the match arranged between the "Beggars" XI, which included several well-known professionals, and a Guy's XI was duly played on the ground of the Reigate Priory Cricket Club on Thursday, September 16th, and to everyone's surprise a definite result was reached, the "Beggars" winning by five wickets on the stroke of time.

After Wednesday evening's downpour the wicket was very wet, and at one time it seemed doubtful if there would be any play before lunch, but the club officials, realising that delay would mean considerable loss to the charity concerned, generously allowed play to start only half an hour late.

The Guy's XI won the toss, and J. A. L.

Leeming and G. H. G. Chase opened the innings to the bowling of Nichols (Essex) and Todd (Kent). Wickets fell fairly regularly, but runs came at a fair pace, and, in spite of a long delay after lunch while it rained in no uncertain fashion, Guy's were able to declare shortly after 4 o'clock, having scored 184 runs for the loss of nine wickets. In spite of the presence of such well-known cricketers as A. P. F. Chapman, B. H. Valentine, W. H. V. Levett, and F. H. G. Chalk in the side, the two top scorers were Hospital students (C. J. O'Gorman, 39, and L. G. Morey, 31).

Tea was taken at the declaration, after which those spectators who had braved the elements (alas for the Hospital, all too few!) were treated to a delightful exhibition of "brighter cricket," combined with many excellent strokes from the bats of such well-known professionals as Taylor (Essex), Eastman (Essex), Brooks (Surrey) and Nichols and Todd.

Play was considerably enlivened by the fact that a sporting and generous member of the public offered to pay the Hospital two shillings for every six hit, and, with O'Gorman bowling slow spinners, many a resounding whack echoed across the ground. O'Gorman's tactics proved fairly successful, however, as two men were stumped and two caught in the deep in their efforts to help the Hospital and win the match. Brooks caused much amusement by insisting on running very short runs so that he could get the bowling and have a crack for six in a good cause!

Considering the state of the wicket and the very unpleasant weather, the crowd were treated to some excellent cricket, and there is no doubt that, given better conditions, this match would have proved a great draw.

If the same generosity is again extended by the officials of Reigate Priory Cricket Club, it is hoped to make this match an annual event.

Rugby

RUGBY FOOTBALL RESULTS

Saturday, September 18th—

1st XV, 28 points; Catford Bridge, 6 points.

"A" XV, 3 points; Catford Bridge "A," 11 points.

FORTHCOMING FIXTURES

Saturday, October 2nd—

1st XV *v.* United Services (Portsmouth). Portsmouth.

"A" XV *v.* Old Cranleighans "A." Thames Ditton.

2nd "A" XV *v.* Saracens Ex. "A." Honor Oak Park.

"B" XV *v.* Old Emmanuel "B." Away.

2nd "B" XV *v.* H.M.S. *Worcester*. Greenhithe.

3rd "B" XV *v.* Harrow Ex. "B." Harrow.

Wanderers XV *v.* Chingford Ex. "A." Motspur Park.

Wednesday, October 6th—

"A" XV *v.* Metropolitan Police, "R" Division. Honor Oak Park.

Saturday, October 9th—

1st XV *v.* London Irish. Honor Oak Park.

"A" XV *v.* 1st Battalion Welsh Guards. Honor Oak Park.

2nd "A" XV *v.* 3rd Battalion Grenadier Guards. Windsor.

"B" XV *v.* B.B.C. Away.

2nd "B" XV *v.* Orpington "A." Motspur Park.

3rd "B" XV *v.* Westminster Bank "C." Away.

Wanderers XV *v.* Old Gravesendians. Gravesend.

Hospital Information, etc.

Notice

GUY'S HOSPITAL DENTAL SCHOOL

Applications are invited for the post of Dental House Surgeon in the Children's Department, duties to commence immediately. The appointment will be for a period of six months. Applications should be lodged at once with the Dental Sub-Dean, in the Medical School Office.

Papers by Guy's Men

Kenneth Pringle. Results of early extractions. *Dental Record*, 1937, lvii, 483.

W. S. McConnell. General anæsthesia in dentistry. *Brit. Med. Jour.*, 1937, ii, 591.

Changes of Address

Norman L. Barber, 50, Wimpole Street, W.1. *Welbeck* 7362.

John Bunyan, 51, Queen Anne Street, W.1. *Welbeck* 8611.

Arnold Densham, 69, Wimpole Street, W.1. *Welbeck* 6571.

Birth

DUNNILL.—On September 7th, 1937, at "Otaru," Elmstead Road, Bexhill-on-Sea, to Pauline (née Villiers), wife of Dr. Dennis Dunnill—a daughter.

Marriages

BISHOP—THURSTON.—On September 15th, 1937, at Southwark Cathedral, London, Peter Maxwell Farrow Bishop, B.A., B.M., B.Ch., to Winifred Phyllis Thurston.

DARLOW—GARRATT.—On September 14th, 1937, at the Cathedral, Coventry, John Edward Darlow, L.D.S., M.R.C.S., L.R.C.P., elder son of Mr. and Mrs. J. Darlow, of Grimsby, to Joyce Mary, only daughter of Mr. and Mrs. Louis Garratt, of Coventry.

Death

BURGESS.—On September 2nd, 1937, at Eastbourne, E. A. Burgess, M.R.C.S., L.S.A., aged 86.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

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PASSIM

THE Hospital, and we speak of no special one, but in general terms, is apt to be idealised somewhat by those better-educated members of the laity who have the least to do with it. The altruism and skill of the medical profession, the patience and heroism of the nursing staff, the sleepless nights of hard-working lives devoted to defeating Death, are apt to preponderate in the layman's conception of the hospital routine, so that the newcomer is liable to arrive panting to do great deeds, ready to stand aghast in admiration, humbly anxious to play his role, prepared to make the great traditions in some part his own, eager to identify himself with the huge machine. And so he may come to Guy's and find reality. It was indeed a robust philosopher who wrote :—

> "For truth has such a face and such a mien,
> As to be lov'd needs only to be seen."

Perhaps he was a youthful philosopher, or perhaps he was blind, or perhaps we may suspect Dryden of hyperbole. For there is no denying that reality seems sometimes disappointing, nor least so to him who comes new to Guy's. It is a large, strange place, and at first one may be friendless. And before the goal can be reached, be it pathology or bacteriology from an academic aspect, be it clinical medicine or surgery or dentistry, a practice in the West End and a position on the Staff, or general or panel practice, there are obstacles to be overcome. The path from the Medical School to the wards or the Dental Department is littered with test tubes, compounds of organic and inorganic chemistry, magnets, galvanometers, bodies of amœbæ and the hydra, dogfish, frogs and earthworms, the stamens of *lupinus lupinus* (the common lupin), and pages from the life history of *agaricus campestris*. And then, of course, there are the human corpses and wrecks of physiological theories that litter the chaotic way. But let not the newcomers be downcast. We, the Editors of the *Gazette*, your fairy uncles, have prepared this number, the Special Students' Number, wherein, in turn, guide, philosopher and friend, we show you the intricacies of this brave new world, that you may find your way about. And though at first the world be strange, nor quite what you expected, one can become familiar with anything in time.

We tell you of your courses : chemistry, physics, botany and zoology, anatomy and physiology—all of which lead you towards the patient. And for those who come (those subjects already safely forgotten) prepared to start on work in the wards, we tell of the medical and dental curricula. So much for your work. We have other diversions.

Games are played at Guy's, Rugby and Association football, hockey, ice hockey, lawn tennis, squash racquets, Rugby fives, and cricket in the summer. Then there are fencing, boxing, jiu-jitsu, swimming, shooting, sailing, and, for the hearty, rowing. There is also a branch of the University of London Officers' Training Corps. So you may exercise yourselves. And for your intellects, you have your textbooks and the Library. For social recreation there are the Physiological Society (as its name implies, primarily for those in the Medical School), the Physical Society, patronised by all who work in the wards and others who may care to come, and the Debating Society. Religion is represented by the Christian Union. There is also a band of those followers of Dr. Buchman who sometimes miscall themselves the Oxford Group Movement.

Of these things you can read in the following pages, and you will be assured of a welcome whatever be your trend.

Our predecessors, in previous Students' Numbers, have sometimes felt it incumbent upon themselves to offer you advice. On reading that advice we have felt it, for the most part, to be otiose. But there is one thing that we would say, and you will find it repeated elsewhere—if you live in the Borough, take your opportunities of escape. One tends not to realise until too late how devitalising is its insidious atmosphere. Health may suffer, and in the Borough it often does.

And, by the way, what do you think of our College? We well remember our own sense of dismay when we arrived, and in a correspondence which we lately stimulated upon this subject we found that our experience was not unique. The same thing was being felt in the 1890's. We would not, as this early stage of our acquaintance, dream of pulling your legs, and, however incredible, you must accept it as true that the College has lately been considerably improved. But from you, who see it in all its naked deformity with unaccustomed eyes, we would welcome views as to what further might be done. Our own view is, of course, that the only solution is to pull the whole thing down and build another; unfortunately, for complicated financial reasons, that is at present impracticable. But if you, new readers, can think of any palliative measures by which some even tolerable temporary result might be achieved, we would be glad to know them, and if you are timid or shy, we will, provided that you let us have your names and addresses, allow you to remain in blushing anonymity. Though we offer no prizes, send us your views.

This brings us to another duty which lies perhaps on every new Guy's man. It is the duty of avoiding inertia. We, who have grown old and grey, are used to our Hospital. We have lost the critical faculty. We are in a rut. As we have said, one can get used to anything in time, and we have got used to the fact that there is still no Children's Ward worth the name, that there is still only one squash court, that the lights in the Front Surgery are still on the wrong sides of the doors, that the peculiar trickle of water that has from time immemorial flowed across the pavement in the Park still goes on for ever, that patients have to wait for three, four or six hours before they are seen, that there are still only four bathrooms in a basement for fifty people in the College; we have grown used to these and many other things. We, as parts of this great organisation, have become dumb and numb, blind through habit, anæsthetic with the Borough air; it has us in its grip, this Guy's inertia; tradition has lulled us till we do not complain. We pray, and in this at least we are earnest, that it will not be so with you. The trouble is not that the place has no good points, but rather that there are many, and in their gradual discovery one may be narcotised into uncritical acceptance.

▭

By the time this has appeared there will have taken place the annual distribution of prizes, which officially opens the academic year at Guy's. The address, we hope, will have been given and the prizes distributed by Sir Edward Poulton, D.Sc., F.R.S., this year's President of the British Association, with the Treasurer, Lord Nuffield, in the Chair. We hope in our next number to give an account of this function with a verbatim report of Sir Edward Poulton's address.

▭

We mentioned last week that we had read in a variety of journals of an agitation among the nursing profession which was resulting in the formation of a Union for the improvement of living conditions for nurses. Of this proposition in general terms we expressed approval, and surprise that it had not been put forward before. Now we are further surprised, for we have received communications from members of the nursing profession, which we publish elsewhere, which suggest to us that the approval with which this proposition has been received in the ranks of the profession is by no means unqualified. In fact, the nurses seem divided against themselves. Our mere passing comment was not intended to unmask such strife, but since it has been now directed also against ourselves, we feel compelled to make a plainer statement of our views.

Miss Taylor, Assistant to Sister Tutor, and Miss Moulton, a former Guy's Sister, write to tell us of the formation, some twenty years ago, of the College of Nursing. This was not news to us, for we were already well aware of its existence, though we were less well informed as to the extent of its activities, a state of ignorance which, surprisingly enough, seems also to exist among the majority of those nurses with whom we come into contact in the course of our professional lives. If such ignorance is as general as it appears, and if, further, the College of Nursing is a body which successfully safeguards the interests of the whole profession, such a state of affairs would seem a strange one. We do not wish to lose sight of this question in following our correspondents' excursions into questions of what is or what is not red tape, or of the position of an iron grille (in the

precise location of which they appear to differ), or of a comparison of the lives of the nurses with those of their sisters in colleges; the word "college" has too variable an interpretation, and colleges are in themselves too dissimilar for such argument to have either value or relevance.

The nub of the matter is this: does or does not the College of Nursing adequately fulfil its function of protecting the interests of the profession as a whole? We do not doubt that it has done much good work, but the question remains, is it or is it not adequate? Both our correspondents would give us the impression that it is, though they offer no positive assurance. We are hesitant to accept such a view without reserve, for if the interests of nursing are as perfectly guarded as they would have us believe, we can see no reason why any further movement should have been initiated. We are driven to the conclusion, especially as the movement is a general one, that such a need must exist, and we doubt if lack of its recognition by our correspondents can make it any the less real. Confirmation of our view, if it be wanted, seems to be afforded by the information, given by Miss Moulton, that at Guy's our nurses are joining the new movement in considerable number. Everyone must, at one time or another, have encountered expressions of discontent among the nursing staff, perhaps increasingly less mild. Is it then unreasonable to support, in general principle, a movement which may bring opportunity for alleviating such dissatisfaction?

Miss Moulton, however, is less concerned with the suitability or otherwise of the formation of such a representative body as we have been discussing, as with "the attitude of our would-be champions that matrons and sisters are the nurses' natural enemies." If we are to be included in the category of would-be champions, a romantic role with which we are not anxious to associate ourselves, we would agree that her deduction—"Must we then remain Staff nurses for ever and a day, refusing promotion, lest we become contaminated and one of *them*?" (speaking of Sisters and Matrons)—has that ring of truth sometimes the property of a thing spoken in jest. When she says that "before very long Sisters and Matrons will require a bodyguard and a resident solicitor to protect and advise them," that is an amusingly fantastic conception; but is it so far in the realm of phantasy as to be utterly dissociated from a whimsical truth?

It may be a difficult thing to say, but we have observed, and feel there is no doubt about it, that there is something of this gulf which our correspondent describes between the lower and the higher members of the profession. We realise that the ideas of the higher members can find expression in the activities of the College of Nursing, but we wonder how far this body can find time to attend to the particular problems, arising in individual hospitals, of nurses of junior status. We are aware that in certain hospitals there are attempts to bridge this gulf in the shape of representative bodies elected from the nurses themselves to afford ventilation of such grievances as must from time to time arise. But we sympathise with those nurses who, recognising that their continuance at the Hospital must of necessity depend upon a high standard of behaviour, may hesitate before pressing any claims they may wish to make, both through natural diffidence and through reluctance of incurring even the semblance of a reputation for professional rebellion.

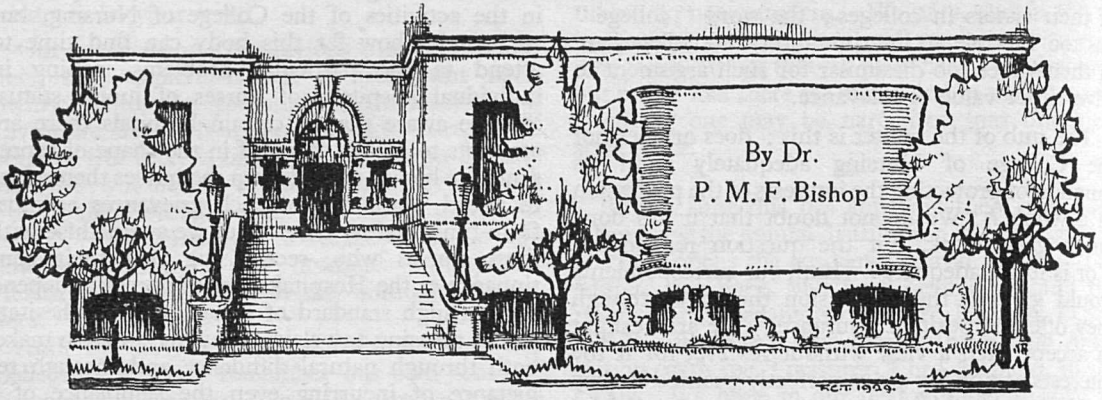
It is perhaps not too much to wonder whether it is a reflection of this diffidence that, despite the widespread sympathy which in private we have heard voiced with our views, the only persons who have expressed themselves in our correspondence columns are markedly higher members of the profession. Indeed, it will be interesting to see whether the supporters of this movement at Guy's will be willing to adopt the same public methods of self-expression.

Although we have no doubt that such diffidence is unreasonable, we know for a fact that it does exist. Towards the remedying of such conditions the activities of the new movement might profitably be turned. In fact, if humorously, Miss Moulton seems to us to have touched the pith of the problem.

It seems to us that the constitution of the nursing profession is, even in this democratic age, one of benevolent autocracy. We will not deny the merits of the arrangement. But we do feel that unless some adequate outlet be provided for the discussion of the real difficulties of the rank and file by the formation of a truly democratic representation, Miss Taylor's fears of the problem assuming a political character may well be fulfilled. It is for the very avoidance of this that we feel that a movement awakening interest in such matters demands approval.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

To Those Undertaking the Pre-Clinical Sciences



By Dr.
P. M. F. Bishop

THE first three years in the life of the medical student are generally supposed to be the dullest. This is because the subjects studied in the pre-clinical period are considered by many to be purely academic, and to have little bearing on the practical training of surgery, medicine or general practice.

Banish this idea completely from your mind when you enter the Medical School. It is true that you will have to work to a syllabus, and that the knowledge you acquire will be determined to a large extent by the requirements of those examinations which must be successfully negotiated before you can enter the wards, where at last you will be dealing with living and dying patients. But there is a reason for everything you will learn in your pre-clinical studies, and that reason is based fundamentally on the experiences of clinical medicine. The first action of many students when they pass the examinations in Anatomy and Physiology is to set fire to their notes and to try to get a decent secondhand price for their text-books. Then they feel they can start afresh on a new life, *the* life, the life of the wards. But though the Medical School is separated from the Medical and Surgical Wards by a spacious park of (sometimes) verdant green, they are much more intimately united as far as their activities are concerned.

Take, as an example, the three subjects organic chemistry, chemical physiology and clinical chemistry. These, you will find, are, in fact, so closely linked together that it has been found desirable for the Chemistry Department and the Chemical Physiology Laboratory to work very largely in conjunction with one another, while the methods taught in the course of chemical physiology are those which are used subsequently in the clinical chemistry which is practised in the wards.

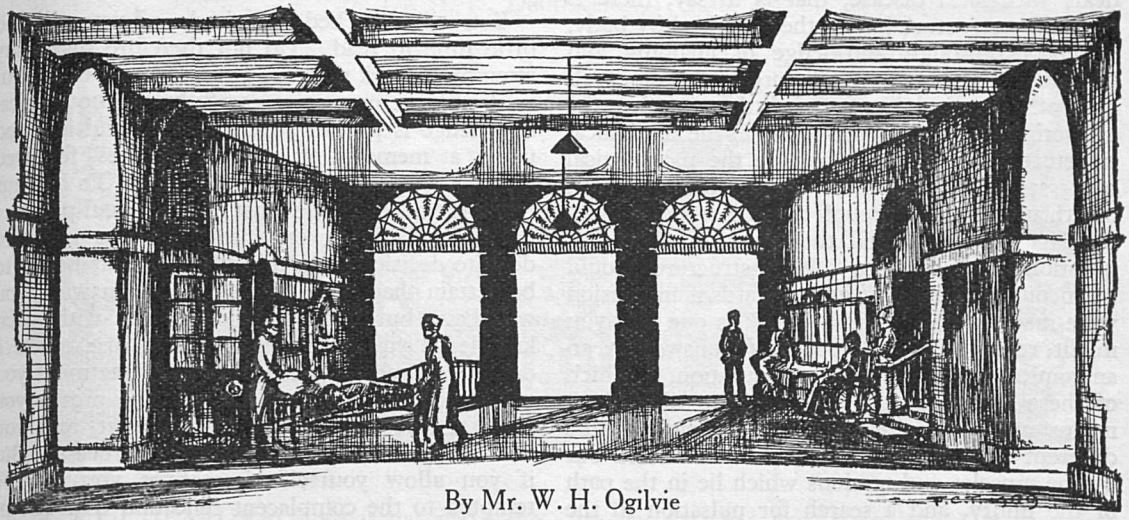
The pre-clinical sciences are designed as a careful preparation for the subsequent clinical work, and if this is fully realised a new interest will be awakened in biology, physics, chemistry, anatomy, physiology and pharmacology.

Most of you will have come to Guy's straight from school, and when you arrive you will be impressed with the relative freedom with which you are endowed. A record of attendances at lectures and practical classes is kept, mainly for the purpose of qualifying you for the examinations. You must realise, however, that these classes are designed to assist you in your work and not to compel you to work. Your life is in your own hands now. If you wish to take an intelligent interest in the manifold activities of the Medical School and of the life of the Hospital, you will be amply repaid. If you abuse the freedom which is given you by escaping from these activities, no one will miss you and no one will care very much. Medicine is a hard training for those who have no inherent interest in it, and the time to develop and cultivate that interest is as soon as you enter the Medical School.

Do not become one-sided. Remember that as a doctor you will come in contact with all kinds and classes of men and women, and you will be expected to take an intelligent part in conversation and to express a reasonable opinion on subjects not directly concerned with medicine. There is no one more boring and depressing than a doctor who has no outside interests, unless it is a group of doctors who can talk nothing but "shop" to each other.

Finally, pay particular attention to taking regular exercise. This not only brings you in contact with your fellow-students, but is essential from the point of view of your health. The Borough is not the most salubrious place to live or work in, and hospital life is strenuous. Try as far as possible to develop an immunity to disease while you are still in the Medical School, by keeping fit and in training.

To Those Entering the Surgical Wards



By Mr. W. H. Ogilvie

GUY'S HOSPITAL rightly enjoys a world-wide reputation as a medical school, which for generations has sent into all parts of the world doctors armed with practical knowledge and with the willingness and ability to take responsibility which a practical training implies. There are two special advantages of the teaching here—the great wealth of material which passes through the wards and Out-Patients' Department, and the responsibility which is given to every man from the very outset of his career. In each appointment he is not taught only, he is asked to carry out essential work for the Hospital and for his patients, and trusted to carry it out well. At the beginning and close of the clinical period stand two appointments which are peculiar to Guy's, Surgical Ward Clerk and Clinical, and both of them have this combination of responsibility and instruction.

It is on the surgical side of the Hospital that you who are now entering the wards will first encounter the practical side of the profession you have adopted as your life's work, and the human material with which that work is to be carried out. It is as well that it should be so, for here the issues are clearer. Later will come the study of prolonged and progressive disease, of those degenerations which follow upon misspent lives or have causes still unknown, of failures rich in scientific interest, but at present beyond your power to remedy. You will meet much that is depressing. But during your first three months in a surgical ward you will find yourself in one of the most cheerful places in the world, where hope is the keynote, and hard, active, useful work your daily occupation.

For you who have chosen aright, this time will stand out with ineffaceable clearness for the rest of your lives. What has gone before has not been without interest, but the interest was academic. It was like the long drilling on Salisbury Plain, which made the raw recruits into the material of Kitchener's Army. The crossing of the Channel took them from make-believe to real war, the actuality for which all the drill had been a preparation. The rehearsal was over, the curtain was up. And so, in a surgical appointment, you are suddenly in the midst of real life. You are confronted with accidents, sudden infections, grave calamities. In the main it may be said of the patients whom you will encounter, that they are healthy, normal, sane individuals, struck without warning by some sudden misfortune. You are present at this crisis in their lives, and it is in your power to help in fighting it. There is something to be done; and when it is done it is your privilege to see the rewards of victory—the quick recovery and the return of hope.

There is another advantage of starting your career on the surgical side. You are introduced

to disease in a comparatively simple form, and the knowledge of anatomy and physiology which is fresh in your mind enables you to grasp very much of what you encounter without the need of lectures or text-books. Very much of surgery deals with local disease, that is to say, there is one faulty structure in an otherwise healthy body. Given a thorough knowledge of anatomy and pathology the teachings of surgery become self evident. Surgical diagnosis is little more than the answering of two questions—what is the anatomical structure involved and what are the pathological processes that have caused the trouble? A man has thrust his arm through a window and a piece of glass has penetrated the forearm. The first question that faces you, "What structures would be encountered from without inwards if an incision were made in such a situation?" is one that you might reasonably be expected to answer in an anatomical paper. The second question, "Which of these structures has actually been divided?" means an investigation of the sensation of the different nerves, and the movements carried out by the muscles and tendons which lie in the path of the injury, and a search for pulsation in the arteries distal to the wound. The treatment is an exercise in anatomy and craftsmanship, very interesting, because the relations which have been memorised by force of will are not brought vividly before you under the bright light of the operating lamp. Your hardly-acquired knowledge makes you not only a sympathetic fellow-man, but one skilled to restore function and promise recovery to the patient.

During these three months you will work very hard, probably harder than you have ever done before, but it is all tremendous fun. Your primary duty to the Hospital is to keep a record of the cases under your care. This you will do as well as possible, both for your own sake and because on the accuracy and lucidity of your account will depend the value of the record in years to come should the same patient be readmitted or should a series of similar cases be investigated for statistical purposes. Besides clerking, however, you will be expected to help in every activity of the firm to which you are attached, from carrying patients to making tea in the dressers' room during "take-in." This appointment is your great opportunity for making yourself proficient. You should familiarise yourself with the somewhat elaborate routine of modern asepsis. You should take every opportunity to watch the dresser looking after your cases, for in the next appointment you will be a dresser yourself, and will be expected to know your work. It is the privilege of the beginner to ask questions, and this you should do in season and out of season. All knowledge which you acquire will stand you in good stead as a dresser, and as a dresser you will have more work to do yourself and less opportunity to learn by watching that of others.

You will go to bed very tired, and you will find little time to read. Do not therefore make any attempt to work through a surgical text-book, but read up your own cases carefully. True surgical knowledge is part of your own self, and is based upon a memory of individual cases followed through and committed to memory. To be thus remembered each case must be a clear-cut picture; therefore begin at once to form the habit of definite decision. At this stage it is far better to be certain than to be right. To begin with, you will have but little knowledge, but with what knowledge you have examine each case, make a definite diagnosis, and decide what treatment you would adopt. Whether the outcome proves you right or wrong, you will remember it, and you will have learned something in the process. But if you allow yourself alternatives you may be tempted to the complacent reflection that one of them at least was right. Any man who could remember all his mistakes would be the wisest surgeon in England at the age of 60.

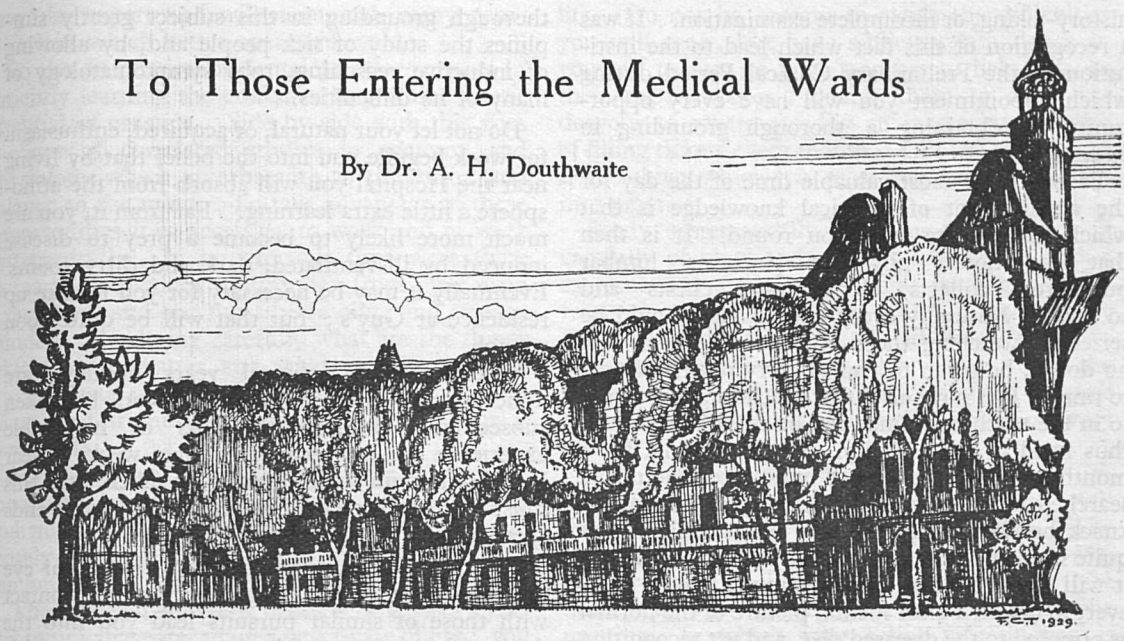
Be interested in everything in your patients and your fellows; no less in the nursing which completes the cure than in the operation which initiates it. It is an old saying that the wise doctor treats the patient as well as the disease. Enter into human relationships with your patients. They will call you doctor and will hang upon your words, and there is much you can do to make them well besides ministering to their surgical wants. In this side of your work alone you will learn much that will help you to success in after life. At Guy's we are particularly fortunate in our patients. There is no foreign quarter in the Borough, no shifting population. British dockers, navvies, carters, factory hands and their wives and children, come into our wards to be made well. They are fine people and proud of living round the best hospital in England. Their happiness and our good name are in your hands.

Notice

A Dance will be held in the Nurses' Home on Monday, October 11th, from 8 to 12 p.m. Tickets (3*s.* 6*d.*) may be obtained from Sisters Keats and Patience.

To Those Entering the Medical Wards

By Dr. A. H. Douthwaite



PARTICULARLY to those of you who come to us from other medical schools, the absence from Guy's of the formality, of the scholastic atmosphere, peculiar to so many hospitals will be very striking. No attempt is made to control your studies as by a schoolmaster. A high degree of freedom is allowed you in the knowledge that every opportunity and help is also offered to those who want to work. You are credited with the intelligence necessary to learn from textbooks, and, therefore, we do not give set courses of instruction by lecture in medicine. The aim at Guy's is to keep as much time free as possible for students to gain practical experience in the wards in order that they shall develop into self-reliant and efficient doctors. The wide capabilities of a Guy's man are recognised by the medical profession all over the world, and are directly attributable to the absence of " spoon-feeding " at this hospital.

It is not my purpose to preach to you of the necessity of hard work and devotion to Guy's. Presumably the majority of you have taken up medicine by inclination, in which case a few days of work amongst sick people will heighten your enthusiasm and provide you with such absorbing studies that no urge will be required.

To the few who are constitutionally tired, again advice will not be offered. No man has ever worked the harder in obedience to exhortation. It may even appear to you that you can drift through your life at Guy's with the minimum of effort This is to an extent true, but these things are noticed, and have been known to lead to a pressing invitation to transfer allegiance to another hospital.

The abandonment of relatively exact sciences dealing with controllable substances and reactions for a life in the medical wards full of materials which, though superficially uniform in nature, actually differ completely by virtue of the unaccountable processes of human minds, not infrequently produces confusion combined with a fear that the earlier studies can be of little practical help. It is, however, precisely this human element which renders clinical medicine at once so fascinating and yet so difficult, for diagnosis usually rests mainly upon symptomatology, and to a less extent upon physical signs. Symptoms, however, have no fixed standard by which their severity can be assessed; their description is inevitably coloured by the personality of the patient.

The natural tendency to proceed to the examination of a patient without taking a careful history is, therefore, strenuously to be avoided. One should rather devote the greater part of one's time to listening to his story, and then, by careful questioning, sift the relevant from the irrelevant. In so doing, the true nature of the disease commonly reveals itself before ever a finger has been laid on the sufferer.

As a matter of course, a very careful physical overhaul should follow; nothing must be left to chance, which rarely favours its disciples. Nearly all diagnostic mistakes are referable to shoddy

history-taking, or incomplete examination. It was a recognition of this fact which lead to the institution of the Preliminary Clinical Period during which appointment you will have every opportunity of obtaining a thorough grounding in essentials.

Probably the most valuable time of the day for the acquirement of practical knowledge is that which follows the afternoon round. It is then that the house physician performs lumbar punctures, collects blood, taps chests and so forth. Naturally every opportunity should be seized of watching these procedures, which will, no doubt, be given to you to carry out from time to time. It is now, also, that special signs referred to in the teaching rounds can be re-examined, and thus fixed in the memory. Every evening, for a month at least, one pair of optic discs should be searched for with the ophthalmoscope. Once the knack has been acquired, and this usually comes quite suddenly after several days of disappointment, it will never be lost. It takes much longer, however, to obtain a clear mental picture of the normal as opposed to the diseased disc, and yet recognition of early change may be decisive in clinching a diagnosis, and possibly even in saving a life. It is for this reason that the daily study of retinæ should be made a fetish.

In addition to your work in the wards, you should attend post-mortem demonstrations whenever possible, and attempt constantly to correlate the morbid findings with the reported clinical signs. Nowhere are the many pitfalls which beset the path of the diagnostician so lucidly revealed as in the post-mortem room, where errors are ruthlessly exposed. In years to come you also will experience the epigastric discomfort which assails us on approaching the exposed remains of a case whose malady during life had seemed so simple of explanation.

As to reading, this should be limited to decsriptions of any disease which you may have witnessed on that day in the wards, whilst the rest of the evening should be devoted to pathology. A thorough grounding in this subject greatly simplifies the study of sick people and, by allowing of inductive reasoning, robs symptomatology of many of its difficulties.

Do not let your natural, or acquired, enthusiasm for work beguile you into the belief that by living near the Hospital you will absorb from the atmosphere a little extra learning. Far from it, you are much more likely to become a prey to disease induced by ill-ventilated, dark and dirty rooms. Eventually it may be necessary for you to take up residence at Guy's; but that will be quite soon enough.

Whereas in pre-clinical years holidays are unnecessarily long, those which can be taken subsequently without the loss of invaluable experience are very scanty. Three weeks a year is the minimum which should be taken, and this must be supplemented by frequent week-ends spent away from town and books.

It is equally important to keep a watchful eye on your mental well-being lest frequent contact with those of similar pursuits lead you into the deplorable condition of having no interest outside that of medicine. To avoid this try to live in diggings with a man in some other faculty, and never go on holiday with a fellow medical student, no matter how desirable a companion he may be.

Seize all opportunities of speaking in public. The Debating Society is an excellent starting point for the practice of an art which is difficult to most of us, but of the utmost value to all.

As a last word, I would draw your attention to the fact that at Guy's quite exceptional reliance will be placed upon you from the moment you take up the duties of ward clerk. Certain examinations are left entirely to you. The case reports are essentially your province. Failure to carry out the duties conscientiously may not only "let down" your house-physician and corresponding member of the visiting staff, but, also, even endanger the lives of patients for whom you share responsibility.

To the Dental Student

By F. N. Doubleday, Esq.

IT is our privilege to welcome another generation of Freshmen to the Schools at Guy's. The first lectures within our walls were given by Fox one hundred and forty years ago; from then until the present time the School has constantly taken a leading part in the teaching of students and in the care of patients. You, therefore, enter upon a tradition. It is not always easy to live up to these standards. Coming from the relatively open-air life of a public school, some of the initial training, for example in dental mechanics, may seem irksome—it is worth doing. If a physician failed in delicacy of touch, his physical examination of a chest, or delicate estimation in various tests would be of poor value, and then all his expert book knowledge of diagnosis would be of no worth. A surgeon who fails to tie his arteries with care or stitch up his wounds with care is

never an expert and will meet with many complications which better operators avoid.

So the foundation of dental practice consists in patiently learning the craftsmanship which is one essential of practice. Side by side with this goes a series of correlated studies in anatomy and physiology which give breadth to the vision and balance to the mind. To take advantage of these opportunities it is necessary to work and to work systematically. In no previous time were there so many distractions to lure men from their main occupation, and one must be resolute and strong-minded, considering carefully what are the things which really matter and what are the pursuits which waste opportunity. Great opportunity is yours, but it must be seized while the hour is favourable.

May we appeal to you all to care for your equipment and to keep the Hospital buildings clean and tidy. Litter is a sign of a poorly-geared and loosely-working mind; every individual student can and should avoid this.

Those of you who now begin your Conservation Room practice enter upon a new phase of life; you begin for the first time to come in contact with patients. Remember that your care of them really influences their health and sometimes their life. Do not be content to evade the difficulties you will meet, but have sufficient confidence in yourself to turn to your teachers to help you, as their experience will enable them to do. Endeavour to return steadily an increasing number of filling tickets every month. Clinical experience is the thing which has most value when you get into practice.

Study systematically; a time-table which is carefully planned and steadily adhered to makes examinations a pleasure. Solid reading of large textbooks stores knowledge which is checked by discussions with teachers and with fellow-students. Exact knowledge is gained by writing, both the compiling of notes and the writing of practice examination papers should occupy a part of every week.

The State practice of dentistry is yearly increasing, and to learn to associate with one's fellow practitioners is most necessary. The Dental Society affords this opportunity. Mr. Herbert (the President) and Mr. Malleson (the Secretary) will welcome men of all years to the meetings, in which your active participation is desired. Your teachers wish to be your friends, and are at all times glad to discuss any difficulties which you may meet.

To Those Entering the Nursing Profession

EVERY two months some sixteen to twenty candidates enter the Preliminary Training School at Guy's in order to take the three months' course before entering the wards as probationers. Many people wonder what makes the modern girl take up nursing as a career. So many other avenues of work are now open to women, and so much criticism is constantly being levelled at the organisation of the profession in the daily papers and elsewhere. Yet in spite of this, the large hospitals such as Guy's still manage to attract large numbers of well-educated girls to train.

One hopes and believes that the majority of them come with a real sense of vocation, an urge to do some useful practical work in what is essentially a woman's sphere. If it is not in this spirit that they come, it augurs badly for the profession in the future. It was this spirit that led the splendid women in the last century to take up a very much harder and more exacting career than it is to-day. But we believe that the young girls who offer themselves to-day are made of equally good material.

Modern nursing dates back only fifty years or so, and is as yet hardly on its feet. Developments are taking place rapidly, and changes are best carried out by those who know and understand nursing conditions from within. There is a great need for educated women within the ranks, women possessed of initiative and energy to carry on the good work of developing the profession in the right direction.

One hopes that many Guy's nurses now in training may be able to keep their ideals intact and visualise a finer nursing service which they may help to bring into being. The years of training are difficult and sacrifices have to be made. Outside interests may suffer for the time being, owing to the exacting nature of the work, and it is too much to hope that in a three and a half year's training there should not be some "bad patches." But a large and busy hospital is a world of interest in itself for those whose heart lies in fitting themselves for the privilege and responsibility of caring for the sick.

Good wishes to you all for a very profitable and happy time at Guy's. And may the wards of the Hospital and the nursing profession be the richer for your having entered.

The Medical Curriculum

1. The Sciences

THE matriculated student will, in his first year, study Inorganic and Physical Chemistry, Physics and General Biology, and at the end of this period, provided he has worked diligently in the laboratories, and attended the Lectures and Revision classes regularly, should have no difficulty in passing the First Examination for Medical Degrees. In his second year he will study Organic Chemistry, together with Anatomy and Physiology, and at the end of the second winter, provided, as before, that he has worked steadily from the beginning, should have little difficulty in passing the First Part of the Second Examination for Medical Degrees. Anatomy, Physiology and Pharmacology are then taken as the Second Part of this Examination at the close of the third winter, prior to starting Clinical work in the wards.

From Medical and Dental students who are preparing for the Pre-Medical Examination only six months' work is required, but those entering without previous knowledge of Chemistry and Physics will find that time hardly sufficient, and are usually advised to take the full "year" of three terms, or nine months.

The importance of practical work cannot be too greatly emphasised, and lectures and books can but supplement work done in the laboratory. Guy's men have no excuse for neglecting laboratory work. Students are strongly urged to form early the habit of spending their spare hours, apart from those officially allotted, in one or other of the laboratories. Reading should be left for the evening. After a day in the laboratory, reading a good text-book will be found to give ample scope for thought. "Cramming," or the memorising of words and phrases, without a knowledge of the corresponding realities, is one of the worst intellectual habits a student can acquire, and in the long run invariably leads to failure.

CHEMISTRY AND PHYSICS

The student is often tempted to regard the study of Chemistry and Physics as one of very little use when once his preliminary examination is passed, but he will find in his study of the sciences of Physiology, Pharmacology and Pathology that a proper understanding of Physical and Organic Chemistry and Physics is invaluable and essential. That this is so is now fully recognised in the London University curriculum, which should be carefully studied by every London student.

BIOLOGY

Biology, like all the sciences, is properly studied in the laboratory, because things seen are better understood and remembered than things read or heard. Animals and plants are the true sources of a knowledge of biology, and more correct than the text-books written about them. Acquire, therefore, the laboratory habit and record carefully what you observe. Use your books as reminders of the things seen. Draw much. It saves you from the habit of verbal memorising. The drawing of a diagram is the best way of testing the accuracy of one's knowledge in a descriptive science like biology. In the laboratory are also demonstrators whose duty it is to clear up your difficulties. Equip yourself with the necessary instruments. A microscope is needed at once. Its purchase requires care and advice. Students have been known to saddle themselves with an instrument that gives them unsatisfactory results for a whole year, and gets condemned in a later microscopical course. This is poor economy, as the difference in price between a good and poor microscope is small. If you are buying a secondhand instrument, bring it to the laboratory for examination by the demonstrators before you complete the purchase.

ANATOMY

Too much emphasis cannot be laid on the importance of the careful dissection of the human body as an aid to the student in learning the subject of Human Anatomy. The man who has not dissected the whole body with average care can never hope to acquire familiarity with the subject, and experience shows that the man who neglects or "scamps" his dissections—and incidentally endeavours to make up the lost ground by dint of hard reading—has infinitely more difficulty in satisfying the examiners than the man who has completed his dissections conscientiously, even though he may have given much less time to his reading than he might have done. This is, it is true, the sordid examination point of view, but it is, nevertheless, not to be lost sight of.

It is unfortunate that limitations of time and other cogent reasons demand that the student should begin his dissections at the same time as he receives the introductory lectures on anatomy, an arrangement which increases his initial difficulties in the dissecting room. At the very outset

he will find himself faced with a mass of facts in which there seems to be neither rhyme nor reason. After a little, however, the fog by which he has been enveloped will begin to lift, and, gradually, he will come to appreciate that what at first appeared to be a chaotic collection of structures, endowed with unintelligible and apparently meaningless names, resolves itself into a reasonable and orderly arrangement of structures, whose names are, for the most part, peculiarly appropriate. There is a danger lest, at this stage, when he is beginning to see daylight, he should occupy too much of his time with the names which must necessarily be given to individual structures. The names themselves have, of course, no intrinsic value, and are merely used to facilitate description. Attention should be devoted instead to discovering the functions of the structures displayed by dissection and to observing the relationship which exists between function and structure. Throughout his whole period in the dissecting-room the student should seek to correlate his Anatomy and his Physiology. If he does so he will find that he is simplifying the task in hand, for the one subject will help him with the other.

It is important, too, to appreciate that while the cadaver is being dissected the topographical information acquired by this means can be applied to the living subject. Most of the superficial structures and many of the deeper ones can be recognised either by the eye or by the hand in the living body, and the student should learn to identify on his own person, so far as is practicable, the various bony points, muscles, tendons, etc., which can be seen or felt. He should also endeavour to visualise on himself the position of the deeper structures which present no surface landmarks. After all, when he enters the wards, and in after life, he will have to deal for the most part with living patients, and, apart from actual surgical operations, he will be compelled to visualise on their bodies the position of the structures which he has dissected in the cadaver. The correlation between the dissected subject and the living body is difficult only when it is regarded as a separate section of human anatomy to be learnt from books, after all the dissections have been completed and in the last few days before the professional examination. The student, therefore, must constantly strive to form mental pictures of the regions as he dissects them, and to project these pictures on to his own body.

Once he has obtained a reasonable knowledge of the general anatomy of the body, the student who possesses any imagination will find Human Embryology a fascinating subject. Here he will find the explanation of much that may have hitherto appeared to be inexplicable, and here, too, he will see modifications of function and structure proceeding side by side.

The Guy's student is fortunate in having a modern and well-equipped department in which to work. In addition to the material which is always available in the dissecting-room and in the specimen rooms, the famous Towne collection of wax models, which is housed in the Anatomical bay of the Gordon Museum, can and ought to be utilised freely for study and for reference.

PHYSIOLOGY

Before the student can hope to appreciate the abnormalities and disturbances of function which form the material for his clinical studies, a sound knowledge of the normal function of the body is essential. Physiology is the science which supplies this basic knowledge and the student who obtains a firm grounding in this subject reaps his reward.

Physiology is a science which is entirely based upon the triad of experiment, observation and deduction. For this reason its study is of inestimable value for the training of the mind in the powers of logical reasoning. The major part of the course consists of experimental work in which the student is able to see for himself and draw his own conclusions; this makes the subject extremely interesting, and relieves the student from a heavy burden of hard facts which can only be retained by a feat of memory.

The practical classes are divided into three groups. In the experimental class the student records and measures the activities of living tissue from frog and mammal. In the chemical class he studies the composition and reactions of biological material. In the human class he makes observations upon the human subject. In all classes stress is laid on those aspects of his work which have a direct bearing on his future studies, so that he should carry into the wards a knowledge of the more important biological processes.

As a guide to the student in his studies a course of lectures is given each year; this serves, not so much as a source of actual information, as a means of correlating and balancing the student's knowledge. Observations, which may be quite dissociated in the student's mind, can be brought together—woven into a complete whole. In addition, clinical demonstrations are given to the senior students each week, and these serve as an introduction to the application of physiological principles in the study of the disturbances associated with disease.

The student is advised to begin his reading of Physiology with an introductory book such as

Thornton's "Human Physiology." The choice of text-books is large, but Halliburton's "Handbook of Physiology" or Starling's "Principles of Human Physiology" should satisfy his needs. There is a small library in the Physiological Department, and students may borrow works on special subjects.

PHARMACOLOGY

Pharmacology is the study of the action of medicinal substances on the normal body. It is the basis of all methods of chemical treatment and forms an important natural scientific link between physiology and practical medicine.

A preliminary knowledge of physiology is essential. The student is introduced to the subject before his clinical period, but cannot realise its full significance until he has come face to face with the actual problems of therapeutics in the wards. A short revisional study at this stage of his curriculum is strongly recommended.

A six months' course of bi-weekly lectures and demonstrations is given during the two winter sessions, and should be attended by all students. Revision classes are provided for each of the four examinations of the Conjoint Board yearly. Candidates for the B.M. (Oxford) must also attend the practical classes which begin in January.

Lectures.—On Mondays, 4 p.m., Fridays, 1.15 p.m., in Physiology Theatre, starting Friday, October 7th.

Demonstrations.—Details to be announced later. In Pharmacology Laboratory. Dates to be announced during lectures.

Revision Classes (Conjoint).—To be held in November in Pharmacology Laboratory. Dates to be announced later.

Text-books.—Dixon's "Manual of Pharmacology" is the most suitable text-book for general use. Gunn's "Introduction to Pharmacology and Therapeutics" summarises the subject in a readable way and is invaluable for revision purposes. The practical classes are based on Sollmann and Hanzlik's "Experimental Pharmacology," but Dixon's "Practical Pharmacology" is sufficient as a short laboratory guide.

A comprehensive Departmental Library is available for those more deeply interested in the subject.

2. Pre-Clinical Period

THE extension by the Examining Bodies of the student's curriculum of study has allowed the addition of an extra period of three months' preliminary instruction before the student actually embarks on his duties in the wards

It has long been felt that the time allotted to the study of Medicine, in the limited sense, has of late years been encroached upon and curtailed by his duties in the Surgical Wards and the Special Departments, and the opportunity was gladly seized of redressing the balance by giving him extra tuition in medical subjects.

The object of the Pre-Clinical Period is to instruct the student in the routine methods of examination of patients and in the detection and interpretation of physical signs, so that on his entry into the Medical Wards he will be able immediately to derive full benefit from the teaching of the Registrars and Physicians without the laborious explanations and tedious insistence on elementary points necessary before the introduction of the scheme.

In addition to this instruction, which he receives from the Clinical Tutor in charge of the course, the student gets a course of Clinical Chemistry from Dr. Ryffel and Dr. Waterfield, Elementary Pathology, Minor Surgery and Bandaging from the Surgical Registrars, and instruction in the methods of examining the eyes, ears, nose, etc., from the heads of the departments concerned.

3. The Wards

SURGICAL WARDS

THE appointment of surgical ward clerk is the first of the appointments held by the student during his Clinical training. In many ways it is the best of all the appointments, as most of the teaching, both by the Surgeon and the Registrar, is for his special benefit. Furthermore, a reputation for keenness and ability earned in those early days will follow him and help him throughout the rest of his time at the hospital. Each clerk is attached to one of the surgical units for three months, and it is his duty to record the history and progress of the cases allotted to him.

The wards are open to the student at 10 o'clock, and he should have written up the history of the case and, as far as possible, have examined the patient before the Registrar of the unit begins his round at 10.30, when each case is discussed and the report of the clerk confirmed or amplified. The student during this period will do well to

confine most of his attention to the detection of the physical signs, and should procure from the Medical School Office a copy of the red book entitled *Instructions in Case-Taking, Surgical*, which he will find a very good guide to sound and systematic examination of the patients.

While he is acting as ward clerk the student attends a course in Elementary Pathology and Pharmacology, and at the same time has unrivalled opportunities of seeing dressings and operations, more especially during his "take-in" week. There will be much hard work, and many late hours, but there will be also incalculable compensation in seeing and learning the practical points that will stand him in good stead. He is doing his own work of ward clerk, but must remember that he is learning also to be a dresser.

As a dresser the student spends two periods of three months. While the surgical work is very dependent on the dresser for its smooth efficiency and good results, the dresser must realise that he himself is very dependent upon his work, for it is during these six months that he lays the foundation of his surgical knowledge and sound after-care. Someone has said that every surgeon should be his own dresser, so that the dresser must appreciate the responsibilities that he assumes in thus deputising for his surgeon.

We have said very little about the actual tasks of the dresser; he should read the "standing orders" relative to his appointment, and from then on everything depends upon himself. He has been given a valuable appointment and one difficult to do well, but one that repays hard work almost more than any other appointment he can hold.

MEDICAL WARDS

To each medical ward clerk is allotted a certain number of beds, and he is expected to examine and write full reports on all patients who are admitted into these. Occasionally, it so happens that a patient is too ill to be examined except by the House-Physician and Physician, or that a case dies before the ward clerk has had an opportunity of seeing it. In these circumstances he should obtain the history and an account of the symptoms, physical signs and progress of the case from the House-Physician, and should base his report on these data. It cannot be too strongly insisted that a report, however brief, must be written on every case, and it is of the greatest importance that *the diagnosis and remarks made by the Physician should be entered at once into the report*. Moreover, any errors detected by the Physician or Registrar in the original report should be immediately corrected. In the event of a patient dying, the ward clerk must obtain the abstract of the post-mortem findings and carefully enter it up, and it need hardly be said that all clerks should make every effort to see the post-mortem examination of any case they may have seen during life.

The medical wards are open to clerks from 10 till 12 noon, and from 1.30 till 6.30 in the evening. The Registrars begin their rounds at 10.30, and by that time a clerk should at least have full notes of the history of any new patient who may have been admitted into one of his beds, and he should have a full report in readiness for the Physician in the afternoon. Ward clerks should realise that they are expected to know the details not only of their own cases, but of every patient under their Physician. It is no excuse to plead ignorance because "this is not my case." If a clerk will only take the trouble to make himself conversant with each case in this way he will find at the end of his six months that an enormous amount of clinical material has passed through his hands, and he will probably have acquired enough knowledge of medicine to enable him to pass the Conjoint Final with but little additional reading. But so many men waste their time through sheer laziness in the medical wards, never realising that they are throwing away experience which would prove invaluable to them later on.

Again, the curriculum provides but six months for the study of pure medicine, whereas nine months are allowed for the pursuit of surgical appointments. Further, during their period of medical clerkship men are apt to take more time than is justified for the study of Pathology and Bacteriology, which they have neglected whilst in the Surgical Wards.

An hour spent in the wards after tea three or four times a week will give opportunities not only for going over cases and writing up reports, but also for seeing the House-Physician tap chests and abdomens, etc. The treatment, too, which each case is receiving, may well be studied at this time.

As regards reading, the best method is to study the text-book account of each disease as one comes across it in the wards or in discussion, and afterwards to compare, if possible, the text-book description with the symptoms and signs presented by the patients. At the same time the most important medical journals should be read regularly, for by this means only can the student keep himself in touch with modern work. The *B.M.J.* and the *Lancet*, the *Quarterly Journal of Medicine*, as well as the *Journal of the American Medical Association*, are especially recommended.

Books that may be recommended are the following: The well-known text-book by Osler, Dr.

Poulton's revised edition of Taylor, Dr. Conybeare's *Text-book of Medicine*, and *Physical Diagnosis* by Cabot. For second three months ward clerks, the most important monographs in Allbutt's or Osler's *System of Medicine* will prove valuable and interesting reading. For laboratory work Hutchinson and Rainey's *Clinical Methods*, or Dr. French's book will be useful.

OBSTETRIC & GYNÆCOLOGICAL WARDS

After finishing appointments in the Medical and Surgical wards the student is posted to the Obstetric Department for six months. During the latter half of this time he is also attached to the Physician for the Diseases of Children. The Obstetric Dresser is responsible for case-taking in the wards and at Out-Patients, assists at operations, and during one month acts as Extern in the Maternity Charity. The Department has 26 beds reserved for gynæcological cases and 21 for the reception of cases presenting complications in pregnancy, labour and the puerperium and normal labours.

As an intervening link between the Obstetric and Children's Departments is the Salomons Centre, in which the health of mothers and infants is fostered by the practice of preventive medicine.

With this wealth of clinical material it should be possible for every student to obtain a sound knowledge of methods of diagnosis and treatment founded on no small experience. It is, however, recognised by teachers of Gynæcology and Obstetrics that this desideratum is not always attained. It is undoubtedly true that many a young practitioner has to admit a regrettable ignorance of the ailments which afflict his female patients and of the proper management of the pregnant, parturient and lactating woman. And these subjects form the foundation upon which a successful family practice is built. Responsibility for this sad state of affairs hardly rests with the student, but he will do well if he starts his clinical work with the firm determination to avoid the pitfalls that beset his feet. He must realise that practical experience in diseases peculiar to women cannot be acquired in the space of the three months which he will spend in Queen Ward. As he passes from one appointment to another he must resist the tendency to develop the compartmental mind and must endeavour to cultivate a wide outlook on medicine as a whole.

The study of the physiology and pathology of the functions of woman should be begun at the outset and continued throughout the period of clinical training. The man starting as Surgical Ward Clerk should include among his initial purchases a text-book on Gynæcology, for purposes of reference, and should make a point of attending the lectures of the Obstetric Surgeons. He should also avoid no opportunity of acquiring the " tactus eruditus " so essential to the accurate diagnosis of pelvic disorders ; the inherent impossibility of permitting a class of students to examine women patients one after the other renders it imperative that this experience be gained over a considerable period of time.

The study of midwifery he may well leave until he becomes an Obstetric Dresser ; the art of the accoucheur cannot be learnt from books.

4. Pathology and Bacteriology

PATHOLOGY

WHEN the student has passed the Second Conjoint or M.B. Examination, he is halfway through his medical curriculum, and he should have gained a working knowledge of the functions of the body in health. This knowledge is an essential preliminary to the study of the most important of the medical sciences, viz., Pathology, or the study of the functions of the body in disease. Throughout his life the student, if he continues to study and practise medicine, must ever keep pathology in the foreground. It is desirable, therefore, that the study of pathology be begun as soon as possible and continued throughout a medical career.

The subject is an exceedingly large one, and it is customary to divide it into several sections :—

1. General Pathology ;
2. Morbid Anatomy ;
3. Morbid Histology ;
4. Functional Pathology ;
5. Chemical Pathology.

During the pre-clinical period the student must attend classes and demonstrations in elementary pathology, bacteriology and chemical pathology.

During the Autumn, Spring and Summer Terms systematic lectures and demonstrations in pathology and bacteriology are given. Three lectures and three practical classes are held weekly, the former from 9 a.m. to 10.30 a.m. and the latter at 12 noon.

Regular attendance at these classes is imperative, and the attractions of the wards and of clinical work should on no account be allowed to interfere with laboratory studies.

Apart from set lectures and classes, senior students and house-officers are cordially invited to make use of the resources and facilities provided

by the laboratories, and especially to attend the weekly Demonstration of Post-mortem Room specimens on Friday afternoons.

Every man should, as far as is practicable, follow out the pathology of each and every one of his cases.

Is a bacteriological investigation to be made? He should follow it out as far as possible. Is a portion of tissue removed for microscopical examination? He should see and examine the section. Is a chemical examination demanded? He should endeavour to see the analysis carried out. He should never miss an autopsy on any one of his cases, and should make a point of keeping a special note-book in which he can enter the clinical history and progress of a case, the post-mortem findings if the case comes to autopsy, and the result of the histological examination together with a general review of the case in the light of that further evidence.

Set hours cannot be given for these lines of study; they must be fitted in as time and opportunity permit. In short, efforts should be made to see as much practical work and as many demonstrations in pathology as can be arranged. There are few days when no pathology can be learned. Post-mortems are held every day at 1.30 p.m., except on Wednesdays and Saturdays, when the hours are 12.30 p.m. and 11.30 a.m. respectively. Attendance at these will amply repay the time expended.

Informal classes in Pathology are held twice weekly, and in Bacteriology once weekly, during the October and May terms. These, though primarily intended for M.B. students, are suitable for, and should be attended by, those sitting for Part I of the M.B.Cantab. and the Final M.B. of Oxford or London University.

During the later clinical appointments certain students may hold a few pathological posts, such as Student Demonstrator in Pathology or Student Assistant in the Bacteriological Department.

There are many books which might be recommended, and what suits one student may not prove attractive to another. The following, however, will prove adequate for all the students' purposes: in Pathology, Boyd's Textbooks or MacCullum's or Muir's Manuals; in Morbid Histology, Barnard's Handbook; in Clinical Pathology, Panton and Marrack; and for Bacteriology either Muir and Ritchie's Manual, Bigger's Handbook, or Ziusser's Bacteriology.

BACTERIOLOGY

Bacteriology, although for a time regarded by the clinician as affording information of merely academic interest, has now made a most profound impression upon the theory and practice of both medicine and surgery, and by providing specific treatment for many microbial infections has emphasised the necessity and stimulated the demand for exact diagnosis, and it is towards this direction that the student's interest is guided by the class in Practical Bacteriology.

Particular attention is devoted from the beginning to the technique of various investigations undertaken in connection with ward work. Thus the student himself examines sputum, pus and morbid exudates by various methods to demonstrate the associated bacteria. He is instructed in staining methods and the practical work of culture making, and is, moreover, encouraged to repeat for himself during the intervals between successive classes any observations and experiments previously carried out, in order to equip him for the performance in general practice of those more obvious methods of bacteriological diagnosis which experience has shown are both reliable and valuable. Demonstrations are also given upon the life history of the most important of the organisms which are pathogenic to the human race, and by the study of " pure cultures " an attempt is made to impress the chief characteristics of each upon the mind of the student, whilst the changes such organisms undergo or produce when they gain entrance to the human tissues are carefully emphasised.

Throughout the course considerable stress is laid on the further applications of bacteriology to treatment, including the use of various remedial agents such as sera and vaccines, which have been elaborated in the bacteriological laboratory for the treatment of disease, together with those facts and theories relating to natural and acquired immunity upon which bacteriological therapy is based.

5. The Special Departments

THE CHILDREN'S DEPARTMENT

In-Patient Accommodation.—Dr. Cameron has under his care 2 beds and 16 cots in the Children's Ward. On two days in the week, at present on Tuesdays and Thursdays at 2 p.m., Dr. Cameron goes round the ward and gives clinical instruction. Afternoon rounds are also conducted by Dr. Ellis.

Out-Patient Department.—Children under 10 years of age are seen in the Children's Department at Out-Patients on Mondays, Wednesdays and Fridays from 9.30 until 1 o'clock. Dr. Cameron attends on Mondays at 10 a.m., and Dr. Ellis on Wednesdays and Fridays at 10 a.m., when clinical instruction is given.

The Salomons Centre is for the care of the mothers and children of the Midwifery Charity; attendances at the Centre are made by dressers in the Obstetric Department.

OTO-RHINO-LARYNGOLOGICAL DEPARTMENT

This Department is organised on the unit system. There are two units, one under the care of Mr. Mollison, the other of Mr. Layton, and Mr. Cann is the Assistant Surgeon. Patients are seen in the Out-Patient Department, admitted when necessary to the special wards, Dorcas and Christopher, and returned to the Out-Patient Department. This arrangement allows members of each unit to follow up the cases. Mr. Mollison's firm sees out-patients on Tuesdays and Fridays at 12.30 a.m., Mr. Layton's on Mondays at 9 a.m., and Thursdays at 12.30 p.m.

Dressers are appointed to the respective firms, and have every opportunity of becoming expert in the technique of examination of the ear, nose and throat, and of gaining experience in diagnosis and treatment. Large numbers of school children are seen. Minor operations are performed in the Out-Patient Department; these include, amongst others, operation for the removal of nasal and aural polypi, and for the lavage of the maxillary antrum; these operations are performed under the supervision of the Surgeon or the Clinical Assistant.

Twenty-seven beds and six cots are now allotted to the Department, and each firm operates twice a week. Mr. Mollison and Mr. Layton "take-in" during alternate weeks, and emergencies are admitted under the care of the firm on duty.

THE OPHTHALMIC DEPARTMENT

The Ophthalmic Department of the Hospital is in charge of the two Ophthalmic Surgeons, Mr. Morgan and Mr. Law. They are helped by three Assistants, one House Surgeon and Dressers. The Dressers are appointed four times a year for a period of three months, and assist the Surgeons at Out-Patients and at operations, and are responsible for the recording of the cases both in the wards and at Out-Patients. The Ophthalmic Department is an open field for any student to explore as far as he is willing and able, the amount of clinical work being sufficiently great for him to see all the more ordinary and common diseases of the eye in the space of three months.

The student will soon find that he is quite unable to form any opinion of his own on an ophthalmic case until he has mastered the use of the ophthalmoscope and can readily and accurately decide what is the refraction of the eye, and if the "fundus oculi" is healthy and normal. The theory of retinoscopy can be taught and is simple; the practice, however, requires constant application by the student before he can hope to obtain any sort of facility in it. The difficulties are mainly initial ones, and any time and trouble expended in mastering them will well repay any man in after life when he has qualified and is in practice.

Twenty-two beds and 2 cots are allotted to the Department in Eye Ward, and the firms attend Out-Patients as follows: Mr. Morgan, Tuesday and Friday at 12.30 p.m., and Mr. Law Monday and Thursday at 12.30 p.m.

COMBINED ROUND

A Clinical Demonstration of selected cases for students and graduates is given on Tuesdays at 2.15 p.m. by Sir Arthur Hurst, Dr. Conybeare, and other visiting Physicians.

NEUROLOGICAL DEPARTMENT

This Department is under the direction of Dr. C. P. Symonds and now provides facilities for a full three months clerkship, which offers excellent opportunities to those who desire practical experience in one of the most difficult branches of medicine. Tuesday and Friday mornings are devoted to Out-Patient work; Dr. Symonds holds a teaching round on Thursday mornings in the Eye Ward, while the Registrar goes round on Mondays.

DEPARTMENT OF PSYCHOLOGICAL MEDICINE

This is now separated from the Neurological Department and provides a full three months course of Clinical tuition. In addition to Lectures and Clinical Demonstrations held at a mental hospital during the summer term, Dr. R. D. Gillespie is also responsible for a series of addresses on Normal Psychology during the spring session. Out-patients are seen on Tuesday and Friday mornings at 10 a.m.

THE DERMATOLOGICAL DEPARTMENT

Out-Patient Days.—Dr. Barber: Mondays and Thursdays at 9 a.m.

Dr. Forman: Wednesdays at 9 a.m.

Wards.—There are three male and three female beds in the Eye Wards, one female in Mary Ward

and one male in Bright Ward for Dermatological cases requiring careful supervision or treatment in bed.

Instruction in the diagnosis and treatment of diseases of the skin is given in the Out-Patient Department, and clinical demonstrations on selected cases are held from time to time.

THE GENITO-URINARY AND ORTHOPÆDIC DEPARTMENTS

These two appointments are now taken separately, but have a common House Surgeon. Students acting as Dressers in the Genito-Urinary Department have excellent opportunities of acquiring knowledge which will be useful to them in actual practice and examinations.

The Genito-Urinary Department is under the care of Mr. Doherty, who sees patients on Tuesdays and Fridays at 1.30. A large variety of cases can be seen. The in-patient beds are for the most part devoted to patients requiring severe operations.

There are 7 male in-patient beds in Christopher, 2 female beds in Queen, 1 bed and 1 cot in Evelyn, and 2 beds and a cot in Job Ward.

Students should realise that their attendance at this Out-Patient Department is very necessary, as is evidenced by the very advanced state of disease in which some patients arrive for examination.

The Orthopædic Department comprises a large out-patient clinic and nineteen beds—12 female in Dorcas Ward and 7 male in Christopher—devoted to patients suffering from deformity. Out-patients are seen on Monday and Thursday afternoons, and Minor Operations performed on Wednesday afternoon, and in the Out-Patient Department the student will meet with every variety of deformity, congenital and acquired. Considerable facilities are afforded for experience in the relief and cure of all chronic diseases of bones, joints, muscles, etc. Instruction in the principles and most modern practice in the use of appliances, plaster technique, and the more useful forms of Physio-Therapy is given by Mr. Lambrinudi and Mr. Stamm the Orthopædic Surgeons, and the Registrar. Numerous operations of a minor nature are done, such as manipulations for stiff and painful joints, correction of misshapen and rickety limbs, correction of scoliosis and immobilisation of tuberculous joints.

The in-patient beds are devoted to the most serious operative cases, such as extensive tendon transplantations, correction of malunited fractures, bone-grafting, the making of new joints, etc. Guy's is a pioneer hospital in possessing an excellent workshop for the manufacture of every form of splint and appliance.

It is in the Orthopædic Department that the principles underlying the mechanical disabilities of the limbs and spine are emphasised and their explanation made clear, and the experience to be gained here is invaluable. The great utility of orthopædic surgery became evident to very many during the war.

THE TUBERCULOSIS DEPARTMENT

The Tuberculosis Department is a reference Department for out-patients suffering from diseases of the chest. Patients attend on two days a week, Thursday afternoons and Monday evenings. For suitable cases arrangements are made for admission to sanatoria. The patients return to the Out-Patient Department after leaving the sanatorium. The Department provides extensive opportunities for studying methods of investigating early and doubtful cases of pulmonary tuberculosis, also for observing special forms of treatment such as artificial pneumo-thorax. A special appointment is now connected with this Department.

THE DEPARTMENT FOR VENEREAL DISEASES

This Department is open from 9 a.m. to 8 p.m. on all week-days, and from 10 to 12 noon on Bank Holidays.

Treatment is carried out for all venereal diseases in women, men and children, and patients may be referred from other departments at any of these times.

Students may attend the male section any evening from 5 p.m. to 7 p.m., and Dressers in the Gynæcological Department may attend the female section on Mondays from 5 p.m. to 7 p.m. or Wednesdays from 2 p.m. to 5 p.m.

Demonstrations are held on Thursdays at 5 p.m. in the Demonstration Theatre in this Department.

Dressers are appointed to the Department every three months.

PRACTICAL PHARMACY AND DISPENSING

One of the many important things all medical students must know is how to write a prescription. It may even be necessary for the majority, when qualified, to be able to dispense the same. All students, therefore, would be well advised to acquire as much knowledge of the subject as they can.

The student is taught, practically, how to dispense the different medicinal preparations; he learns to write prescriptions, due regard being paid to doses and incompatibilities.

The course is conducted by the Hospital Pharmacist.

THE MASSAGE DEPARTMENT

Massage as a training for women has been taught in England since 1888. Guy's Hospital opened a training school for non-resident women in 1913. The training extends over a period of twenty months and covers a very comprehensive course in Anatomy, Physiology, Theory of Movement and Applied Treatments by Massage and Medical Gymnastics for most surgical and medical conditions.

Applicants desirous of entering for the course must produce satisfactory evidence as to conduct, character, and education, with a minimum age of 18½ years. There are two terms of entry each year, one in March and one in October.

On completion of the training the students enter for an examination arranged by the Chartered Society of Massage and Medical Gymnastics. This body has a membership of over 10,000 on its register. It provides for a Register which is available to the medical profession and ensures an adequate supply of qualified workers.

Patients are given daily treatments from 1.45 to 4.30 p.m. on Monday, Tuesday, Thursday and Friday, and from 9 a.m. to 12 mid-day on Wednesday and Saturday.

The treatments include massage and re-education of normal function, whirlpool, wax and foam baths. Special classes are held in the afternoons from 2.15 until 4 p.m. for asthma and rheumatoid patients, flat feet, mobilising of stiff limbs and backs, training of posture and weight reducing. Most of the class work is done to music, which is invaluable in training rhythm and relaxation.

Manipulative Clinics are held twice a week :—

Tuesdays at 2.30 p.m. ..... Dr. Crisp.
Wednesdays at 11 a.m. ..... Mr. Mayer.

Members of the Medical Staff and medical students are cordially invited to inspect the methods used for restoring, as far as possible, normal functional use of the body.

During the past year the Fracture Clinic has been conducted three mornings a week in this Department :—

Mondays ..... Mr. Lambrinudi.
Fridays ..... Mr. Ogilvie.
Wednesdays
—The Orthopædic and Surgical Registrars.

ELECTRICAL AND ACTINO-THERAPEUTIC DEPARTMENT

The treatments carried out in this Department include the following : diathermy, high frequency, the application of the constant, faradic and sinusoidal currents, radiant heat, and static electricity, treatment by the Finsen and mercury vapour lamps and radiotherapy.

A special Department has, for some time, been open for artificial sunlight treatment.

A large number of cases are treated in the Department : Chronic joint conditions, nerve injuries, wasted muscles, skin diseases such as ringworm, psoriasis, eczema and rodent ulcer. There are also a large number of cases of malignant disease undergoing treatment with X-rays and radium.

6. Books

ADVICE on this matter is extremely difficult to give, for individual needs are almost as varied as the length of individual pockets, and the adornment of a virgin bookshelf is bound to depend on both these factors. Except in the case of certain essentials for routine work, such as the dissecting room manuals, it is perhaps better to postpone the inevitable visit to the bookseller and first to consult the various tutors and demonstrators in the subjects concerned. They will be more than willing to extend any suggestions made under various headings in this issue of the *Gazette*, and their experience will enable them to advise that blend of old and new best fitted to the individual case

The rapid advance in medical knowledge unfortunately renders the second-hand book almost worthless except in the case of Anatomy, where the advances, though many and real, are not apt to be so revolutionary as in Physiology and Medicine itself. A Physiological text-book probably becomes out of date in less than a year, a text-book of Medicine in two or three years at least, so that in these subjects at any rate recent editions are essential.

All that is most distinctive in current Guy's teaching is to be found in the *Guy's Hospital Reports*, which contains articles written for the most part by members of the Hospital Staff. The unqualified man has the special privilege of purchase at a much reduced price, an advantage that he will be wise not to neglect.

A great number of publishers are responsible for medical books, and a just estimation of the rival claims for their various productions is quite beyond the scope of this article. Mr. Humphrey Milford at the Oxford University Press offers a wide range of medical works of uniform excellence in subject matter, binding and printing. Messrs. J. & A. Churchill publish Taylor's "Medicine,"

edited by Dr. Poulton, Romanis and Mitchiner, the *Recent Advances Series*, and many other well-known works. Henry Kimpton publish Boyd's Textbook of Pathology and Pathology of Internal Diseases. E. & S. Livingstone, of Edinburgh, present books containing the valuable teaching that emanates from both sides of the Tweed. Many splendid books are published by Baillière, Tindall & Cox, Cassell & Co., Ltd., Edward Arnold & Co., Ltd., John Wright & Sons, Ltd., and Medical Publications, Ltd., while H. K. Lewis & Co., of Gower Street, sponsors a number of books in nearly every branch of medicine. Messrs. Lewis also run an excellent medical circulating library, familiar to generations of medical students, which should prove invaluable to the man who wishes to dip briefly into all the latest books. This is assisted by reference to their catalogues. Messrs. Henry Kimpton, of Holborn, and Foyle, of Charing Cross Road, specialise in second-hand books.

Mr. H. H. Grattan, in the Borough High Street, is able to supply most of the books in common demand over the counter; any others he can be relied upon to obtain as quickly as possible.

The Dental Curriculum

THE Dental Student is supplied at the Medical School Office with the Prospectus, Standing Orders, Lists of Instruments, Calendar and Clubs' Union Book.

These pamphlets should be carefully read in order that acquaintance may be made with the general arrangements of the School and the scope of the work upon which the student will become engaged.

Notices regarding the time and place of Lectures are to be found posted up by the main entrance and at the head of the Main Staircase in the Dental Department, and on the notice board outside the Medical School Office.

Instruments having been purchased at a dental depot, the student should satisfy himself that he has been supplied with all of those described in the Hospital list, and have them inspected by his demonstrator.

It is inadvisable to purchase instruments before they are needed. Instruments for prosthetic work are required for the B.D.S. course at the beginning of the second year, and for the L.D.S. course at the beginning of the first year. Clinical instruments are required for the B.D.S. course at the beginning of the fifth year, and for the L.D.S. course at the beginning of the third year.

Among the various depots at which instruments may be purchased are the following: The Amalgamated Dental Co., Broadwick Street, London, W.1., and 12, St. Thomas's Street, S.E.1; The Dental Manufacturing Co.,Alston House, Newman Street, W., and 2, Maze Pond, S.E.1; Cottrell & Co., 15-17, Charlotte Street, W.1; L. Porro, Ltd., 33, New Cavendish Street, W.1; The S. S. White Co. of Great Britain, Ltd., 126, Gt. Portland Street, W.1, and 19, Borough High Street, S.E.1. It is a wise precaution to arrange with the company supplying the instruments at very small extra cost to have the handles of all instruments stamped with the student's initials Students are advised not to purchase equipment or instruments from other students without first referring and submitting these to a member of the Staff.

The course of study for the B.D.S. London covers a period of five years, of which the first year consists of Chemistry, Physics and Biology. The second year is occupied with the study of General Anatomy and Physiology, General Histology and Dental Prosthetics. The study of Dental Prosthetics is continued during the third year, together with Dental Metallurgy. The subject of Dental Anatomy and Physiology, Dental Histology, Medicine, Pathology and Bacteriology constitute the fourth year's work, and the fifth year is occupied by General Surgery (Lectures, Demonstrations and Dressings), Operative Dental Surgery, Orthodontics, Dental Materia Medica, Dental Bacteriology and work in the Conservation Room.

L.D.S. students who come under the New Regulations must pass the Pre-Medical Examination in Chemistry and Physics before they can begin their four years' course. Subsequently, their first term is devoted to Dental Mechanics and Elementary Anatomy and Physiology, and it is important that the student gets a good grounding in the former at this early stage. During the remainder of the first year the student continues his work in these subjects and takes Part II of the First Professional Examination at the end of the period. In his second year he completes his training in Dental Mechanics, studies Dental Anatomy and Physiology, Normal Dental Histology and Dental Metallurgy, and takes Part III (Special Anatomy and Physiology) of the First Professional Examination at the end of the second

term, and Part I (Dental Mechanics and Metallurgy) at the end of the second year.

Third-year students for the L.D.S. begin the Clinical courses with a period of probationary work upon the phantom head. The operative course, conducted by a Staff demonstrator, is very comprehensive. It includes most of the operations that the student will subsequently be called upon to perform upon patients, namely, gold and other fillings, crowns, inlays and the treatment of devitalised and septic teeth. These operations upon the dummy form an excellent ground work in operative dentistry.

Thereafter the course of work consists in holding and diligently carrying out the work of the following appointments: *Probationer Dressership in the Conservation Room; Dressership to the Director of the Conservation Room; *Dressership in the Conservation Room; *Dressership in the Children's Department; Dressership in the Local Anæsthetic Extraction Room; Dressership in the General Anæsthetic Extraction Room; Casualty Dressership; Clerk to Anæsthetist.

In addition, the students prepare for the Second Professional Examination in Medicine, which is taken at the end of the third year of study, and attend the courses in General Pathology, Bacteriology and Medicine. Students are reminded that no course of study for this examination is recognised until Parts I and II of the First Professional Examination have been passed; furthermore, no study for the Final Examination is recognised until the whole of the First Professional Examination has been completed.

During the fourth year, students continue with their appointments in the Conservation Room, Anæsthetic Room and Children's Department, and, in addition, attend the courses of instruction in preparation for the Final Examination, *i.e.*, General Surgery, Dental Surgery, Operative Dental Surgery, Orthodontics, Dental Materia Medica, Dental Bacteriology and Radiology.

No students, apart from those holding the post of Assistant Dental House Surgeon, are allowed to work in the Conservation Room unless holding one of the appointments marked *, and application for these appointments must be made by the student quarterly, in March, June, September and December. A helpful pamphlet is available at the Medical School Office, perusal of which will indicate when and for what posts to apply.

An X-ray course is taken by the student in his final year.

The time varies, according to whether the course for the B.D.S. or L.D.S. is being taken, at which a student will come into actual contact with Hospital patients, and he should always try to be punctual in his appointments with them. There is nothing more irritating and annoying to a patient than to be kept waiting unnecessarily; it also delays to a very great extent the easy working of the Department, and is detrimental to the public esteem of the Hospital. Further, the student should always remember to cultivate a courteous and gentle manner towards his patients.

Dental students will profit by following the practice of the Special Departments of the Hospital, *e.g.*, Throat and Ear. They will also have numerous opportunities of observing the more remote effects of dental disorders in the General Wards and Out-Patient Department.

Students in difficulties about their work and needing advice are invited to consult the Dean, Sub-Dean, Administrative Dental Officer or any other member of the Staff, who will be pleased to do what they can to promote their interests.

Guy's Hospital Clubs' Union

THE Clubs' Union is constituted by an amalgamation of the various student clubs and societies, both athletic and non-athletic, with the object of furthering their interests by mutual support. It also simplifies the collection of subscriptions; by the payment of an annual sum of 5 guineas a student obtains the privilege of membership of all the constituent institutions, whereas non-members are excluded from participating in the activities of any.

The affairs of the Clubs' Union are under the control of the Clubs' Union Council, consisting of six Staff and six student representatives, elected annually. The constituent institutions are: Association Football Club, Athletic Club, Cricket Club, Debating Society, Dental Society, Fives Club, the *Guy's Hospital Gazette*, Golfing Society, Hockey Club, Ice Hockey Club, Lawn Tennis Club, Miniature Rifle Club, Pavy Gymnasium, Pupils' Physical Society, Rifle Association, Rowing Club, Rugby Football Club, Squash Racquets Club, Students' Club and Swimming Club. The Christian Union, the Guy's Physiological Society and the Guy's Hospital Musical Society are not affiliated at the present time. The activities of these clubs and societies are posted on the special notice-boards in the Colonnade.

Detailed reports on most of the above institutions are to be found in the following pages. The following notes may provide subsidiary information.

The 15-acre ground of the Clubs' Union is

within a quarter of an hour of the Hospital; not only are we very fortunate in having it so close, but also in having one of the best grounds in the London area. Frequent trains run from London Bridge Station to two stations close to the ground —Honor Oak Park and Crofton Park. Recent additions and improvements to the ground itself, the Pavilion and the Stand, have provided really excellent quarters for the Rugby and Association Football Clubs, and the Cricket, Hockey and Lawn Tennis Clubs. Another ground is provided for some of the junior Rugby Football teams at Motspur Park, which is easily reached from Waterloo Station.

The Rowing Club is affiliated to the Thames Rowing Club at Putney, where members are entitled to all the advantages of that Club. Members of the Golfing Society may play on one of many courses at specially reduced rates (see Golfing Notices). The Athletic Club supervises the activities of Guy's men belonging to the Inter-Hospital Hare and Hound Club.

By kind permission of the Matron a swimming bath in the Nurses' Home is available for students on alternate days. Squash and Fives have been available up till this month on courts which are now to be demolished to make room for extensions to the Nurses' Home; new courts are to be erected at once, and adjoining shower-baths and changing-rooms will also be provided.

During the last season many teams and various individuals, representing many of the athletic clubs, distinguished themselves in their respective fields, not only in the Inter-Hospital but in more open competitions. Special mention may be made of the Athletic, Fencing, Rifle and Sailing Clubs. This state of affairs is very gratifying to all present and past Guy's men; it is hoped, and there is every reason to expect, that the forthcoming season will be even more successful.

THE STUDENTS' CLUB

The Students' Club, perhaps the most important section of the Clubs' Union, is housed in the College, where there is now an excellent Catering Company, open only to members of the Clubs' Union. The Pavy Gymnasium is also housed here, where classes are given in Boxing, Fencing and Gymnastics. The Physical and Debating Societies hold their meetings in the College.

Further information about the different clubs can be found in the Clubs' Union Year Book—obtainable at the Medical School Office, and new students are also advised to consult the notice boards in the Colonnade.

Considerable improvements have recently been effected at the ground at Honor Oak Park. There is a new Grand Stand, replacing that destroyed last year by fire, and seating 600 people. There are three hard tennis courts open for general use. A considerable sum has been spent upon thoroughly redraining and returfing the ground, and it is now in excellent condition.

An excellent programme of home matches has been arranged by the Rugby Football Club—*vide* Fixture Cards—and it should be noted that members of the Clubs' Union are entitled to free admission to the ground on these, as on all, occasions, on production of their membership cards.

For many years it has been our hope to effect a reduction in the subscription fees, but when the many privileges are considered, the fee is only moderate.

Rugby Football Club

IT is common knowledge that most clubs have their lean years, and, although the 1st XV reached the Final of the Hospitals' Cup, last season must surely have been the worst in the history of the Club. However, it is my firm belief that every member of the Club is determined to do " bigger and better things " in the coming season.

E. S. Nicholson has been elected Captain and R. C. S. Dick, Vice-Captain. We feel sure that the team could not be in better hands.

We have little news of new members as yet. But I think we can safely say that Louis Balsrow, the Springbok centre, who has been playing so well in the New Zealand tour, will be playing for the Hospital before the end of November.

Mr. J. H. Winston has, once more, arranged an excellent fixture list for us, including Coventry, Harlequins, Cambridge, University Gloucester, the Royal Air Force, and the Army.

Fixtures have been arranged for seven XV's, and almost everyone wanting a game should be able to get one. There are two pitches at Honor Oak Park and two available at Motspur Park.

Trial games will be held in the middle of October. People wishing to take part in these should enter their names, position, and previous experience on the list posted in the Colonnade. With team secretaries meeting every week, and " retired members " watching junior games, no new talent should be missed.

Finally, we welcome Mr. Hughes back again as President of the Club, and sincerely hope that his present good health will continue.

H. H. CRABB,
Hon. Secretary.

Association Football Club

ALTHOUGH the Soccer Club failed to regain the Junior and Senior Inter-Hospitals Cups, the past season was a satisfactory one.

The Hospital's 1st XI played 22 games, of which 11 were won, 5 were lost, and 6 were drawn. Unfortunately, many games had to be scratched owing to adverse weather conditions during the latter part of the season.

At Easter the season was completed with an interesting tour in Germany, where two games were played, and the members received unforgettable hospitality.

This year two regular teams will be run in conjunction with an additional Wednesday eleven.

The prospects for the coming season are very promising, and an attractive fixture list has been arranged. Most of last year's players are available, including G. G. Rees, the United Hospitals' forward, H. A. Lee, D. W. Drew, and others.

Of the newcomers we welcome H. B. Stebbings, who has "kept" regularly for Highgate School for the last four years.

The new Captain is G. W. Dorr, under whose leadership we anticipate a prosperous season. B. M. Heap, who strengthened the Hospital's defence last year, has been appointed Vice-Captain.

All those who are interested in soccer should add their names to the list in the Colonnade as soon as possible to ensure getting an early game.

Fixture cards are now available, and may be obtained from the Match Secretary.

G. M. P.

Hockey Club

IT must be many years since the Hockey Club has looked towards the opening season with such optimism. Every member of last year's team is still with us, so that we can at least hope for an equally successful season. It is our hope that the team may be strengthened by some new players, or by some improved members of last year's Cup-winning 2nd XI, to enable us to win the Senior Cup after too long a lapse.

A very successful tour was held last Easter in Guernsey, and we are indebted to Dr. Marston and the Clubs' Union for the generous help given for this purpose. It is proposed to make a tour an annual event, and plans for a tour in the Easter of 1938 are already being considered. We should like to draw the attention of members to a Dance to be held on November 5th. Keep the date free, come, and make it a success!

For the benefit of newcomers, it may be pointed out that there are four regular teams representing the Hospital. The 1st and 2nd XI's play at Honor Oak Park, while the 3rd and 4th XI's have their home games on the London University ground at Motspur Park. Stronger and fuller fixture lists have been arranged, and we hope to see many new members in our ranks this year. With such a variety of teams there should be no hockey player, whatever his standard, unprovided for, and all wishing to play hockey should place their names on the list posted in the Colonnade, when every effort will be made to give them regular games.

Our President is again Dr. Poulton. The Club is deeply indebted to him for his assistance and encouragement in the past, and we look forward to the season with him as President.

We are very fortunate in being able to call upon J. B. Franklin again to captain the Club, and he will be assisted by last year's secretary, A. C. Greene, as Vice-Captain. We should like to congratulate T. C. Thorne on his appointment as Secretary of the United Hospitals Hockey Club.

Team Secretaries for Season 1937-38 :—

1st Eleven	E. J. Martin.
2nd Eleven	H. P. Merrick.
3rd XI	J. S. Scarlett.
4th Eleven	D. A. Osborn.

Grounds.—Honor Oak Park (First and Second Elevens), trains from London Bridge (S.R.) to Honor Oak Park station. London University Athletic Ground (Third and Fourth Elevens), trains from Waterloo (S.R. Main Line) to Motspur Park station. Cheap tickets are obtainable from the College Restaurant.

E. J. M.

Lawn Tennis Club

THE Lawn Tennis Club at Guy's has just completed a successful season. It is hoped that as many newcomers as possible who are interested in the game will, in due course, make themselves known to the Secretary. At the beginning of next season further notices will appear giving details of tournaments, matches, etc.

The courts are at Honor Oak Park. There are twelve grass courts and three hard. The dressing accommodation has been enlarged and hot showers are available. Balls can be purchased from the groundsman and balls that have been used in matches offered at a reduced price. All equipment can be obtained from W. H. James, Ltd., Aero House, Kirby Street, Hatton Garden, E.C.1, at reduced prices.

Squash Racquets Club

ALTHOUGH the facilities for playing Squash here are still quite disproportionate to its popularity, we are more optimistic about the future. It is rumoured that we may expect two new courts some time next year. Be that as it may, the standard of play is still incommensurate with the enthusiasm for the game. We feel the remedy lies in a more conscientious effort to make the " ladder " work. Although sufficient skill to enjoy the game is soon acquired, real improvement is only made when one chooses a more skilful opponent. The ladder, although treated with such disrespect, is designed to facilitate this end and provide us with the strongest possible team. Once more the appearance it presents at the end of the summer will be re-adjusted, and as there are one or two vacancies will anyone who wishes to be put on let me know.

Details of how it is meant to work will be posted in the Squash Court. The Club plays regular matches through the winter and competes in the Hospitals Cup. We are unfortunately still playing in the second division, but we feel that with all the material at hand we ought to be able to build a stronger side and get promotion again.

E. P. CUTLER,
Hon. Secretary.

Rifle Association

THE Rifle Club has had the most successful season for some years.

After some rather disappointing scores in the practice shoots before the commencement of inter-hospitals' matches, the team made a very good score in the first match, the first stage of the Armitage Cup, establishing a lead which was gradually increased up to the final stage.

The United Hospitals' Challenge Cup, another trophy which is competed for by teams belonging to the United Hospitals' Rifle Club, was also won by a large number of points.

The Rifle Club is open to all members of the Clubs' Union, and comprises open range and miniature range shooting.

Open range shooting takes place from April to July at Bisley, where targets are available at 200, 500 and 600 yards on Wednesday afternoons. Inter-hospital and other matches are shot on Saturdays towards the end of the season.

The Armitage Cup competition is shot over four stages, on consecutive Saturdays in June. On the last stage of this competition the United Hospitals' Rifle Association holds its prize meeting, in which valuable prizes may be won.

The Hospital Rifle Club also holds a prize meeting, and another important event of the season is a match against members of the Staff, which is usually held on the first Sunday in June. The United Hospitals' Challenge Cup is competed for during the Imperial Bisley Meeting in July.

The Club is affiliated to the London and Middlesex Rifle Club, and members may use its Club house and targets, which are available at all week-ends during the season.

Rifles are supplied by the Club and are kept with the Armourer at Bisley.

A special cheap return fare of 3*s.* is available from Waterloo to Brookwood on production of a voucher which may be obtained from the Secretary. There is this year a great improvement in comfort and speed of trains to Brookwood owing to electrification of the line.

Last year the Miniature Rifle Club was formed, and the range is situated at Mark Brown's Wharf, Potter's Fields, Tooley Street, only a few minutes' walk from the Hospital.

Shooting takes place during the winter on Friday evenings from 5 p.m., and the rifles are supplied by the Club.

Anyone interested in shooting will be welcomed both on the open and miniature ranges. Further details may be obtained from the Secretary or from the Captain, G. E. Barnard.

N. S. H.

Sailing Club

ALL members of the Clubs' Union are eligible for membership to the Guy's Hospital Sailing Club. We are affiliated to the United Hospitals Sailing Club, which has its headquarters at Burnham-on-Crouch.

The United Hospitals Sailing Club is extremely flourishing and has built up a reputation in the sailing world. It runs a class of twelve fast 15-ft. dinghies, each belonging to one of the hospitals in the Club, and possesses a sturdy half-decked sloop and a gallant 27-ft. whaler.

The Club House is a well-converted barge, moored next to the Royal Corinthian Yacht Club, and offers the essential Bed, Bath, Beer and Blow-out at basic prices to the normal impecunious student.

There is certainly no necessity for those joining to be real sea-dogs, because the facilities for learning to determine the sharp from the blunt end of the boat are ideal.

The main activity of the Club is racing, there being inter-hospital races every fortnight and a gathering-in of pots at the end of the year. Graduating from dinghy racing, one enters the ocean racing and cruising world, the acme of sailing. During this last season, U.H.S.C. men,

and especially Guy's men, have been crewing in all the big ocean races, and the cruising men have covered many miles.

There are, of course, winter meetings, a dinner, and the notable or notorious Sailing Club Ball.

The Clubs' Union pays the 10*s*. annual subscription of forty Guy's members to the United Hospitals Sailing Club, but there is an entrance fee of 5*s*. to the Guy's Hospital Sailing Club.

Any Guy's man wishing to join, or requiring any more information, should get in touch with the Hon. Acting Secretary, W. S. Hacon.

The Pavy Gymnasium

THE Pavy Gymnasium, built and maintained by the generosity of the late Dr. F. W. Pavy, is situated in the College and is open to members of the Clubs' Union at any time. It is equipped for boxing, fencing, gymnastics and jiu-jitsu, and is the headquarters of those clubs. There are showers and baths adjacent.

The respective clubs hold their meetings as follows :—

The Boxing Club has already started training for the season. A ring has recently been installed and the much-needed kit is being obtained. A list of fixtures is being arranged for both First and "A" teams, so that all members stand a chance of representing the Hospital. In order, however, that this programme may be carried out, new members are urgently wanted and will be welcome, whether they have had any previous experience of boxing or not.

A match will shortly be fought between the United Hospitals' Boxing Club, which will include several Guy's men, and the London University Boxing Club, at the Stadium Club. The proceeds will be given to the Appeal Fund. It is hoped that all interested in boxing will give their support.

Training takes place in the Gym. on Tuesdays at 5 o'clock for the present. It is hoped, however, to train on two days a week as soon as the season gets under way.

Further information may be obtained on application to the Hon. Secretary.

The Fencing Club meets twice weekly, on Wednesdays and Thursdays at 4.30 p.m., when two instructors are available. An Inter-Hospitals Competition takes place once yearly, and many matches are fought against other clubs. Several 2nd Team matches have been arranged in order to provide interest for those whose experience is limited. At the end of the season a Novices' Competition is held in foil for those of one year's experience, or who have never represented the Hospital. The winner holds a very handsome cup for a year.

The Club is at present very short of members. Any member of the Clubs' Union, therefore, who is interested in fencing, whether he has fenced previously or not, will be cordially welcomed. For the present the Club is meeting on Thursdays only, in the Gym., and new members are asked to make themselves known then to the Secretary or Captain, who will give them any further information they may require.

The Jiu-Jitsu Club.—This Club was formed two years, and recognised by the Clubs' Union one year, ago. It holds its meeting on Fridays at 5.15 p.m., when expert instruction is given by a professional.

The objects of the Club are twofold. First, to teach its members the art of jiu-jitsu, from the "breaking" of a fall to the more complicated "locks" and throws, and secondly, the application of the knowledge from a self-defence point of view. As a method of self-defence it is second to none.

All new members will be cordially welcomed, and are invited to attend in the Gym. at the above time. When the number of members warrant it, a second day will be arranged.

Although there is no Gymnasium Club, there are various pieces of gymnastic apparatus available for those who wish to use them.

Further details of the above clubs may be found on the notice-boards in the Colonnade.

At the Annual General Meeting of the Pavy Gymnasium on Monday, 27th September, it was decided that the provisional permission given to the Table Tennis Club to use the Gym. should be cancelled as, now that the winter season has started, there is no room for another club.

R. F. PARFITT,
Capt., Pavy Gym.

Golfing Society

President.—Dr. Cameron.
Captain.—B. C. M. Read.
Hon. Secretary.—P. D. Spooner.
Asst. Hon. Secretary.—T. N. Praat.

THE Guy's Hospital Golfing Society has flourished for many years, and is now one of the most active societies in the Hospital.

Anyone who is interested in golf is welcomed, and there are matches and competitions for those who wish to take an active part. A list is put up on the Notice Board in the Colonnade, and to this we welcome all new names.

The Society plays matches, usually on a Wednesday afternoon, and this year we have had fixtures with Wimbledon Park, Addington Palace, Moor Park, St. Bartholomew's Hospital, Royal Wimbledon, Ladies of Addington Palace, Sidcup, London Solicitors' Golfing Society, Old Ep-

somians' Golfing Society, Northwood, Littlehampton, Beckenham, and Sundridge Park, as well as the annual matches—Medicals *v.* Dentals, Medicals *v.* Staff and Dentals *v.* Staff.

As well as these there is a Hospital Cup knock-out tournament held in the autumn, and several meetings including a spring meeting at West Hill (Surrey), and the President's Prize.

I would like to draw attention to a competition to be held on Wednesday, 20th October, at Shirley Park. For details see notice in Colonnade.

The Hospital also will get reduced rates at Addington Palace, Sidcup, Beckenham, and Sundridge Park. For further information apply to me or J. N. Praat.

P. D. SPOONER,
Hon. Secretary.

Rugby Fives Club

THIS Club, which has already been in existence for two seasons, has just recently become affiliated to the Clubs' Union, and would welcome all members who wish to play Fives this season. Although we do not yet possess a standard court on the premises, we have made temporary arrangements for practices elsewhere, and during the coming season shall have about twenty-five fixtures of various degrees of opposition, thus giving as many members as desire an opportunity to participate in match play.

In having as President Dr. R. D. Gillespie we are particularly fortunate, for it is he who has piloted us safely through our early infancy, and under him we look forward to yet another successful season.

O. H. E. BAELZ,
Capt., Rugby Fives Club.

Officers' Training Corps

DUE to the absence of the Secretary, we are not able in this number to give details of a very flourishing institution at Guy's—its O.T.C. Under "News" you will find a description of the Annual Camp which was held this summer. We hope shortly to be able to give a detailed account of the Corps to newcomers.

The Pupils' Physical Society, 1937-38

Hon. President.—John Fawcett, M.D.

Hon. Vice-Presidents.—Sir William Hale-White, K.B.E., M.D.; Sir W. Arbuthnot Lane, Bart., C.B., M.S.; A. P. Beddard, M.D.; R. D. Gillespie, M.D.

Presidents.—W. F. Dunham, Esq.; G. E. Yardley, Esq.; A. Smith, Esq.; P. M. Davies, Esq.; T. H. Shire, Esq.; C. H. Edwards, Esq.; E. Gill-Carey, Esq.; A. Shein, Esq.; L. C. Thompson, Esq.; R. Edwards, Esq.; R. C. S. Dick, Esq.; E. B. French, Esq.

Hon. Secretaries.—C. G. Baker, M.R.C.P.; S. H. Wass, F.R.C.P.

The Pupils' Physical Society of Guy's Hospital is an old and honoured institution. With some such trite tag as this countless secretaries have introduced the Society to the notice of new students entering the wards of Guy's Hospital. Forty years ago, young men would present their papers to the Society with a similar remark, and add that they felt honoured to be allowed to read their papers before so learned a body. The odd thing is that what they said was true; honoured they were, and old and learned is the Society.

I have this evening been reading through the Minutes, as they are written down from 1885 onwards. By doing this I was impressed with the continuity of tradition which has existed through that time and doubtless from times still earlier. The Physical Society has a character of its own such as is only attained by the exercise of much thought and effort on the part of its officers, those who have shown cases and read papers.

In these Minutes are reflected the history of Medicine during the past 50 years, the changes which have taken place in medical training, even the changes in the mode of life of students and of Staff. Illuminating flashes fall from time to time on great characters of the past who exist for us as names only: Samuel Wilks, William Osler, Frederick Taylor, E. H. Starling—and most of those whose names figure to-day on the honorary and consulting staff stand out for a moment as having held office, read a paper, or taken part in a discussion of the Society. The scene changes, the names change, but throughout runs the thread of continuity.

In looking through the programmes of the Society, one is struck by the fact that from 1885 to 1888 a paper was read on eleven of the twelve occasions the Society met annually. In 1889 it was suggested that clinical meetings should be held more frequently—every third meeting. Those were spacious days, when members readily transferred their views to paper and flocked to hear each other talk. In those days, too, members of the Society paid five shillings subscription, and in 1888 the Minutes inform us that ninety of them did so, though I notice the secretaries' tick against the names of those who paid is sometimes absent.

It is of interest to compare the titles of papers

read in the eighties with those of more modern times. "Empyema," by F. Heatherly, "Puerperal Eclampsia," by G. Rowell, "Diabetes," by H. J. Campbell, were subjects in the programme of 1886-87. Any of these might form the subject of a paper to-day, but how differently would they be treated. Occasionally a paper is read which throws some light on the prevailing subjects of medical interest at the time. "Hydrophobia" was the title of C. J. Whitby's paper in 1886, just a year after Pasteur had successfully treated his first case. "Diphtheria," by W. C. C. Pakes, was the subject of a paper read in 1894-5 at the very time when Roux and Behring were carrying out their pioneer work with the use of diphtheria antitoxin. In 1911 a discussion on "Bone-Setting" was opened by Mr. (now Sir) Arbuthnot Lane—the title reminds one of the revolutionary changes in bone-surgery that had a short while before been introduced by Mr. Lane himself.

Throughout the first half of the Minute Book are scattered letters from Sir Samuel Wilks, the honorary president for many years. In reading these letters one cannot fail to be impressed by the sincere love he had for all things connected with Guy's, and especially the Physical Society. In 1900 he replies to the then secretary, Mr. Bellingham-Smith, expressing his willingness to take the Chair at the opening meeting, but modestly suggests that a younger member of the Staff should be appointed in his place. "If anyone could give me a hint by saying that a change was desirable," he says, "I could send in my resignation." No hint was given, however. In 1907, in a further letter, he again suggests that a younger man be chosen and at the same time mildly reprimands the secretary for not having provided him with a paper of the proceedings to which he could refer, on the occasion of the opening meeting the previous year. The last reference to Sir Samuel is made on the occasion of the Conversazione with which the Society opened its session in October, 1910. This was a great occasion; the function was held in the new Medical School Buildings still uncompleted, and on this occasion many of the oldest members of the Staff who represented the past era in medicine met with those whom we now know as senior members. Thus Sir Samuel was in the Chair, "supported," as the *Gazette* report says, by Drs. Perry, Goodhart, Taylor and Savage, vice-presidents. Drs. Hale-White and Lauriston Shaw were still on the Staff, as was Sir Charters Symonds and all were present, and of those better known to us were Messrs. C. H. Fagge, Eason, Mollison, Bellingham Smith, Hopson, Dowsett and Aubrey.

Dr. Eyre showed some "very fine slides and a series of exhibits showing the various stages of the Wassermann reaction," and gave a "clear account of the meaning of the test and the method of carrying it out to an interested crowd." Dr. Price Jones showed a Burker's modification of the Thomas Zeiss Hæmocytometer, and Dr. Ryffel demonstrated "some clinical methods." On this occasion Sir Samuel Wilks brought down his diploma of qualification signed by Liston and others in 1847. Is it too late to hope that some member of the Staff, who still remembers the earlier generation, their characters, their habits and idiosyncrasies, should read a paper to the Society about them, before they and the type of medicine they represented are forgotten? Sir Charters Symonds delivered an inaugural address in 1922 entitled, "Some Old Surgeons and their Writings," from Chesledon of St. Thomas's (1718-1738) to Henry Howse (1870-1902).

One other meeting should be mentioned as of special importance. This was held on October 21st, 1905; the Society was addressed by Sir William Osler, and it was the first occasion on which he spoke in public in this country since his appointment to the Chair of Regius Professor of Medicine of Oxford. The subject of this address was the life and works of Sir Thomas Browne, born just three hundred years before.

These details throw some light on the Pupils' Physical Society in the past. It fills the same need now that it filled a hundred years ago when it was founded on its present basis. It offers an opportunity for those to whom Medicine (and the word is used in the comprehensive sense, which includes Surgery) is something more than a mere means of existence, for those who desire to know more than is necessary merely to get through examinations—in short, for those for whom Medicine is still an Art.

PROGRAMME

1937.

Thursday, Oct. 7th, 8.15 p.m.—Opening Address: "Some Effects of War on a Civil Population." Dr. R. B. Ellis. Chairman, Dr. John Fawcett.

Thursday, Oct. 21st, 8 p.m.—Clinical Meeting. Chairman, G. E. Yardley, Esq.

Thursday, Nov. 4th, 8 p.m.—Clinical Meeting. Chairman, Angus Smith, Esq.

Thursday, Nov. 18th, 8 p.m.—Combined Meeting with St. Thomas's Medical Society at St. Thomas's. Chairman, W. F. Dunham, Esq.

Thursday, Dec. 2nd, 8 p.m.—Paper by J. H. Smart, Esq., "Eye Disease in its Relationship to General Medicine." Chairman, P. M. Davies, Esq.

Thursday, Dec. 16th, 8 p.m.—Clinical Meeting. Chairman, E. Gill-Carey, Esq.

1938.

Thursday, Jan. 13th, 8.15 p.m.—Address : " Some Experiences in Neuro-Surgery." D. W. C. Northfield, Esq., M.S. Chairman, R. C. Brock, Esq., M.S.

Thursday, Jan. 27th, 8 p.m.—Clinical Meeting. Chairman, C. H. Edwards, Esq.

Thursday, Feb. 3rd, 5 p.m.—Combined meeting with the Physiological Society. Papers by C. D. Cormac, Esq., and a Member of the Physiological Society. Chairman, W. R. Spurrell, Esq., M.Sc., M.S.

Thursday, Feb. 24th, 8 p.m.—Combined Meeting with St. Thomas's Medical Society at Guy's. Chairman, T. H. Shire, Esq.

Thursday, March 3rd, 8 p.m.—Paper by W. E. Young, Esq. : " The Virus of Diseases of the Nervous System." Chairman, A.Shein, Esq.

Thursday, March 17th, 8 p.m.—Clinical Meeting. Chairman, R. Edwards, Esq.

SOCIETY'S PRIZES

Treasurer's Prize Essay. 1936-37—No Entry.

The Beddard Prize. To the member who most distinguishes himself in the discussion and demonstration of clinical cases. 1936-37—Not Awarded.

The Laidlaw Prize. Together with £10, to the members who show specimens or read papers of the greatest Pathological interest. 1936-37—R. H. S. Thompson, Esq.

Guy's Dental Society

THE Annual General Meeting of the Dental Society was held on Monday, July 12th. The following officers were elected for the year 1937-38 :—

President—

W. E. Herbert, L.R.C.P., M.R.C.S., L.D.S.

Vice-Presidents—

F. N. Doubleday, L.R.C.P., M.R.C.S., L.D.S. ;
F. Bocquet-Bull, L.R.C.P., M.R.C.S., L.D.S. ;
G. B. Pritchard, L.R.C.P., M.R.C.S., L.D.S. ;
W. Kelsey Fry, L.R.C.P., M.R.C.S., L.D.S. ;
A. Bulleid, L.R.C.P., M.R.C.S., L.D.S. ;
H. L. Messenger, M.C., L.R.C.P., M.R.C.S., L.D.S. ;
K. Hooper, L.R.C.P., M.R.C.S., L.D.S. ;
M. A. Rushton, M.A., M.B., B.Ch., L.D.S.

Hon. Secretary.—M. Malleson.

Hon. Treasurer.—A. G. Beaton.

Hon. Correspondent.—N. F. Clarke.

Hon. Dance Secretary.—J. Symmons.

Committee.—

Any Year Representative ..... R. H. Corfe
4th Year Representative .....H. W. Walker-Smith
3rd Year Representative ..... — Irwin
1st and 2nd Year Representatives —to be announced.

The purpose of the Society is to enable all members of any year to meet fortnightly to listen to and discuss papers read by students. The meetings in the forthcoming year will be held on Thursdays.

The papers read last year were :—

1. " The History of Dental Anæsthetics," by Dr. Keates.
2. " Observations on the Piltdown Teeth," by Mr. Alvan T. Marston.
3. " Root Canal Therapy," by Mr. W. H. West.
4. " Co-operation between the Dental and Plastic Surgeon," by Sir Harold Gillies.
5. " A Practical Classification of Dental Irregularities," by Mr. Robert Cutler.
6. " Diseases of the Dental Pulp—Diagnosis and Treatment," by Mr. R. G. Siggers.
7. " Hygienic Porcelain Bridges," by Mr. E. Stuart-Smith.
8. " Diathermy in Dentistry," by Mr. G. L. M. Williams.
9. " Accidents and Incidents of General Practice," by Mr. P. Lloyd-Williams.
10. " Amalgams," by Mr. Allen.

There was also a Casual Communication concerning " A Case of False Gemination," by Mr. J. B. Hardie.

It can be seen from the above that an extremely wide field is covered.

As the papers are open to discussion, the Society offers an excellent opportunity for any member who is really interested in dentistry as an art to express his personal views in public, and this is one of the main objects of the Society.

A prize of five guineas is awarded each year for the best paper read by a student, and a prize of one guinea for the best Casual Communication.

In the past the papers read have dealt with subjects chiefly of interest to third- and fourth-year students. Consequently many of the first- and second-year men have not attended. In the future, therefore, an endeavour will be made to procure as many papers on " Prosthetics " as possible.

In order to encourage this object, Professor Fenn has kindly offered to present a prize of two guineas for the best paper read on " Prosthetics " by a first- or second-year man. The Society is deeply grateful to the Professor for the interest and generosity that he has shown.

One of the most successful diversions of the Society is an Annual Dance, which lives up to a reputation of being the best " party " of the year ; we hope that it will continue to be so. The Dance will be held on December 1st.

An Annual Dinner provides a most entertaining evening at a very reasonable price, and will be held in the early part of next year.

N. F. CLARKE.

N.B.—A letter on the formation of a National Dental Students' Society, by Mr. M. Malleson, will be found under " Correspondence."

The Debating Society

President.—T. B. Layton, Esq., D.S.O., M.S.
Hon. Secretaries.—H. J. Voss and B. D. Johnson.

THE Debating Society has had a varied career in which periods of intense activity have punctuated its long life of profound somnolence. After passing through several years of relative inactivity, it is to come to the fore again this year. Six debates have been arranged, three to take place before Christmas and three during the Easter term. The first debate will take place on Tuesday, October 12th, at 5.30 p.m. in the " Spit," and will have for its proposition, " In the opinion of this House divorce cannot be justified." Mr. J. S. Wilkie will propose this motion and it will be opposed by Dr. Felix Brown. The President will be in the Chair. It is hoped that this first debate of the season will be a successful one and that as many as possible will participate.

The Society is a constituent of the Clubs' Union, and all students are entitled to attend its meetings without further subscription. These debates provide excellent practice in giving a reasoned exposition of one's views—an art lamentably rare even amongst the mighty.

The Physiological Society

THE Physiological Society was founded in 1901 by the late Professor Pembrey ; since then meetings have been held without a break, even during the war years. Only one other London hospital shares with us the distinction of possessing a Physiological Society.

Now, instead of Prof. Pembrey, Mr. Spurrell is President, and he plays a great part in the life of the Society.

About twelve meetings are held during the winter, at 4.30 p.m. on Thursdays. They are preceded by tea at 4.15 p.m.

The papers are read by students, after which there is a discussion centering on the paper. The following is a list of papers for the coming season:—

October 14th, 1937.—S. Muntabhorn on " Conditioned Reflexes."
October 21st, 1937.—C. C. Spicer on " Quacks."
October 28th, 1937.—R. A. F. Kynaston on " Vivisection."
November 4th, 1937.—J. S. Stead on " Climbing."
November 18th, 1937.—P. N. Swift on " Sunburn."
December 2nd, 1937.—R. Rewell on " Heredity and Psychology."
December 9th, 1937.—J. C. Holman on " The Secretory Theory of Respiration."
January 13th, 1938.—J. A. Gillet on " Physical Fitness."
January 20th, 1938.—H. P. Jones on " The Advantages of the Special Senses."
January 27th, 1938.—B. Frank on " Some Recent Advances in Vitamin Research."
February 3rd, 1938.—J. R. Lander on " Sex Hormones."
February 10th, 1938.—H. P. Jones on " The Advantages of the Special Senses."
February 24th, 1938.— — Buck on " Intestinal Absorption."
—— A. W. P. Stone on " Adaption to Climate."

The Society is not part of the Clubs' Union, and indeed has always prided itself on its autonomous constitution ; consequently there is an annual subscription of 3*s.* 6*d.*, which can be amply redeemed by having tea before the meetings.

The object of the Society is to stimulate the students' interest in Physiology and to get them to air their opinions in public. A glance at the programme will show that the Society does not cater purely for " swots " ; this is borne out by the fact that there were only one or two students in the Physiology Department last year who failed to join, which says a lot for its popularity.

All those who wish to join should apply to the Secretary, whose name appears on the Society's notices in the Colonnade or Medical School.

Guy's Hospital Musical and Operatic Society

THE Guy's Hospital Musical and Operatic Society, one of the younger of the Hospital societies, was founded in February, 1903, by the union of the Nurses' Choral Society with the Students' Glee Club. From its beginning in 1903 until the war the Society gave one or some-

times two concerts a year, which were always successful, both socially and financially. No concerts were held during the war, and it was not until the autumn of 1919 that the Society again started its activities; once again it embarked on a series of concerts until, in 1924, it produced its first Gilbert and Sullivan opera. The series was completed in 1936 by the production of "Princess Ida" at the Fortune Theatre.

During the past year the Society has mainly interested itself in the formation of a male-voice choir and a Nurses' Choir. The orchestra met most regularly, and we were most fortunate in obtaining the services of several talented musicians from outside the Hospital. A very successful concert was held in the spring, and it is hoped that it will be the forerunner of more of a similar nature.

The Society is particularly anxious to have the co-operation of newcomers who are interested in music, orchestral or vocal, and a warm welcome will be awaiting freshmen. A special appeal is made to freshmen because it has been noticed in the past that on first joining the Hospital they have seemed rather reluctant to come forward.

The Wills Librarian has kindly undertaken to introduce any newcomers to the secretaries. There is a notice board in the Colonnade, where all information concerning the Society is posted.

Since the foundation of the Society the secretaries have always been unqualified men, the treasurer has always been a really responsible person, usually a member of the Hospital Staff, and Mr. Mollison has ably filled this post for many years. We have also been fortunate in that Dr. Fawcett has been President since 1923, and we understand it is the only society in the Hospital in which he now takes an active part.

Our Chairman, the Matron, has been associated with the Society for years, and has done much towards its success by presiding over the Executive Committee.

The Annual General Meeting will be held in the Clinical Theatre on Thursday, October 14th, at 5 p.m., when officers for the ensuing year will be elected.

Membership is open to anybody in the Hospital. We are not affiliated to the Clubs' Union, and the Society is open to receive all members of the Medical, Dental, Nursing, Massage and Administrative Staff.

The Christian Union

THE first mention of a Christian Union at Guy's occurs in 1849, when Dr. Habershon, of Guy's, and Dr. Gladstone, of St. Thomas's, which was then on the other side of St. Thomas's Street, started a "Bible Reading" for their students.

In 1853 the name of Dr. Golding-Bird, then Assistant Physician to Guy's, became closely associated with the Union, and he took an active organising part in its proceedings.

Since those days the Union has continued, with one or two small intervals, and has undergone several changes in its organisation, made necessary by varying conditions, until it has reached its present form. It now exists as a means of uniting those men in the Hospital who have taken the Lord Jesus Christ as their personal Saviour and are determined to live their lives to His glory, and to spread this knowledge of His saving grace.

It forms a part of the London Inter-Faculty Christian Union, which is one of those incorporated in the Inter-University Fellowship of Evangelical Unions.

The Union meets in the chapel for prayer at 1 p.m. on Tuesdays and at 12.40 p.m. on Fridays, by kind permission of the Chaplain.

On Tuesdays at 5 p.m. meetings are held in Room 38 of the College, notice of which is posted in the Colonnade on one of the notice-boards.

Anyone who is in sympathy with the objects of the Union is cordially invited to these meetings.

K. W. W.

Guy's Hospital Biennial Dinner

WE would like to remind our readers that the Biennial Dinner will be held at the Connaught Rooms, Great Queen Street, on Saturday, October 30th, at 7 o'clock, and that it is hoped that as many old Guy's men as possible will make a point of attending.

Dr. John Fawcett will be in the Chair, and many well-known Guy's men have promised to act as Vice-Chairmen, so that we feel sure that the evening will be as successful as usual and, as regards those who live far from this great Metropolis, well worth the journey up to London.

Full details of the Dinner appear elsewhere in this number, but we have been asked to remind those who are thinking of attending to send in their names to the Secretary just as soon as they can, in order that the arrangement of tables may be completed.

Correspondence

Bromides in Thyrotoxicosis

To the Editor of the GAZETTE

SIR,—I am constantly asked to see cases of thyrotoxicosis who are being treated with bromides, either given as a sedative or in the form of chloral and potassium bromide as an hypnotic. When such cases are put on iodine as well, they frequently develop a rash which has the double disadvantage of necessitating the withdrawal of the iodine and the postponement of operation. Luminal in small doses is just as effective as a sedative, and the barbiturates are more efficient as hypnotics. It would seem that in many patients there is a definite limit to the amount of bromide and/or iodine that they can take without developing a rash, and in view of the importance of iodine in thyrotoxicosis, I would plead that this limit be not encroached on by the administration of bromides in any form, especially as their desired effect is readily obtained by other means.

Yours, etc.,
E. G. SLESINGER.

14, Devonshire Place,
W.1.

Pulmonary Embolism

To the Editor of the GAZETTE

SIR,—I should like to express my thanks to Mr. Douglas Mitchell for having drawn attention to the widespread occurrence of thrombosis and embolism which appears to have been troubling some parts of the West Country for the past eighteen months.

I made no mention of this in my lecture because it was outside my experience. I gather from Mr. Mitchell's letter that the outbreaks were confined to certain hospitals dealing with puerperal cases, and did not occur in the form of an epidemic spreading from one house to another. If this is the case, one can safely assume that infection was responsible for the thromboses, and the problem clearly is to discover where that infection is lurking. Recent work on puerperal sepsis has shown that in a great number of cases, streptococci, which are responsible for the majority, are to be found in the dust of the patients' rooms and bedclothes. These streptococci can remain active for at least eight days in dust, and thus it is easy to see how one patient after another may be attacked and suffer either from frank puerperal sepsis, or possibly in the case of a different strain of streptococcus from some milder disease, such as Mr. Mitchell has described.

I suggest, therefore, that, if he has any further trouble in any of the hospitals which he visits, he should pay particular attention to the bacteriology of the room, dust and the bed-clothes, where he is far more likely to find the causative organism than on the hands, instruments or gowns of hospital staffs, who are now so well trained in the principles of sterility.

Yours, etc.,
A. H. DOUTHWAITE.

49, Harley Street,
W.1.

The Children's Ward

To the Editor of the GAZETTE

SIR,—It is distressing to read in your able Editorial that the vital question of a new and properly equipped Children's Ward is, in spite of the legacy left for it, likely to be shelved yet again.

To your powerful pleading on its behalf I have nothing to add, save this personal note.

My contribution to the Appeal Fund was sent specially earmarked for this enterprise, which was, I understood, to be one of the first charges on that fund.

Now, Sir, do you advise that, as there seems little hope of its being put to the use for which it was given, I should ask for my "money back"?

Yours, etc.,
"CUI BONO?"

Nurses and a Union

To the Editor of the GAZETTE

SIR,—Some of the articles recently published in the daily and weekly press regarding the nursing profession have been good; many have not been worth commenting upon. I feel, however, that I cannot let your "Passim" in the last *Gazette* pass without remarking on some of the points you mentioned.

You said: "We feel that the idea of nurses banding themselves together into some sort of union to protect their own interests is a good one, and indeed we marvel that the poor defenceless wretches had not thought of this step before." As a matter of fact we have! Twenty-one years ago a handful of nurses banded themselves together and formed a sort of union, the College of Nursing, which now has a membership of twenty-nine thousand. The College has a Charter, and its policy is to improve the nursing profession, including conditions of service, and so to give a

better nursing service to the public. Space does not permit me to say all that the College has done in the way of improving salaries, reducing hours of work, organising pension schemes, etc. I do not think any other profession has advanced as ours has in the last twenty years. "Poor defenceless wretches!" Oh, Mr. Editor, you must have had your tongue in your cheek when you wrote that!

Whilst appreciating the need for further reform, the vast majority of nurses deplore the introduction of a political element into the management of their profession, and prefer to support their own professional organisation. The iron grille you quote might possibly refer to an iron gate in the subway leading to Guy's Nurses' Home. Is it not customary to lock up one's house at night?

An equally ridiculous myth is the "mass of red tape" you speak of. As Miss MacManus said in her recent article in the *Spectator*: "With regard to discipline . . . nurses who have sisters in colleges will often tell you that the comparison reacts in favour of a well-run Nurses' Home and School."

Your remark about the methods of education employed explained much of what you had previously written. Broadly speaking, the method of education is modified to suit the individual student. You have indeed been unfortunate in your informant. Evidence can be furnished which may even commend our methods to you.

Yours, etc.,
FLORENCE TAYLOR.

Nursing and Union

To the Editor of the GAZETTE

SIR,—After an epoch-making display of interest in the affairs of the nursing profession by the Press, we emerged somewhat bewildered, mud-splashed and laurel-crowned, to find that the Editor of the *Gazette* also read the papers, and had given us notice in "Passim."

Guy's has received rather more than its share of publicity. It has been mentioned by name in several papers, and, less openly, but still recognisable, in some of the more sensational papers. We trust that the persons who spilled the gaff, if we may be permitted the phrase, were suitably rewarded on earth, as we don't feel they will receive much reward in heaven. For our part, we never read so many articles in which truths were twisted and twirled until they took on a semblance of something quite different.

The grilled bars mentioned by you are, of course, the gates by which the night division is separated from the day division in the Guy's Nurses' Home. It seems to have been overlooked that the gate has two functions, of which the more important is to keep out those who would disturb the golden slumbers of the night nurses with their aimless chatter.

We are given to understand that Guy's nurses are joining the Nurses' Association, and not in penny numbers either. This newly formed association is going to fight the nurse's battles for her—no longer will Sisters be able to give bad reports with impunity! Six existing trade unions are opening their doors to nurses.

All this is very thought-promoting. But what really worries us is the attitude adopted by our would-be champions, that Matrons and Sisters are the nurses' natural enemies. Must we then remain Staff nurses for ever and a day, refusing promotion lest we become contaminated and one of *them*? It seems to us that before very long Sisters and Matrons will require a bodyguard, and a resident solicitor to protect and advise them.

We are loth to think that so eminent a personage as the Editor of the *Gazette* does not know of the work of the College of Nursing, the recognised professional organisation of the State Registered Nurse. We should like, dear Mr. Editor, to tell you something of its aims and achievements, but space does not permit. If you would care to visit us at the College, we will willingly put you wise as to what we do and how we do it.

Yours, etc.,
WINIFRED E. G. MOULTON.

420, Addison House,
Grove End Road, N.W.8.

"The Future of Speech Therapy"

To the Editor of the GAZETTE

SIR,—The discursive lecture by Mr. Rumsey on "The Future of Speech Therapy" is, in my humble opinion, not likely to make the stammerer's lot an easier one. As far as I can gather, the stammerer's difficulty, in his opinion, is due to failure to approximate the vocal cords firmly, due to insufficient cord resistance. What is the evidence for this? Has Mr. Mollison, who has written a foreword to Mr. Rumsey's book, demonstrated this tonelessness of the cords? And why is it that a stammerer can read when left by himself, or in chorus, as well as being able to sing distinctly? Later, Mr. Rumsey says fear is the determining psychological factor, but I cannot gather what importance he attaches to this.

The rest of the lecture is a diatribe against the methods of Dr. Boome and Miss Richardson,

working for the L.C.C. Their methods do not lay any stress on imitation of well-belanced speech. Here, apparently, exists a gulf separating Mr. Rumsey from the L.C.C. which the former cannot cross, and he contends that those engaged in general and special practice are on his side and a section of the medical profession employed in the Government and Municipal services on the other. This is far from the truth. The best article I know on "Stammering" is Dr. Cameron's, in Garrod, Batten, Thursfield and Paterson's "Diseases of Children," third edition, p. 702, which, in less than two pages, sums up the position clearly. I have visited one of the L.C.C. clinics, and have seen that they were following the same lines as Dr. Cameron suggests, albeit with the addition of teaching "relaxation." They realise with Dr. Cameron that "the stammerer can and does speak perfectly," and—

"To help the stammerer it is necessary to produce a complete change in his emotional attitude to his trouble. By some means he must be helped to the necessary self-confidence. To attempt treatment solely by a series of exercises in articulation and correct breathing is to deal with a symptom and not with the cause. The speech-trainer who is successful, as he often is, must be something of a psychiatrist as well, and must know how to control the underlying emotional stress. Every effort must be made to shield the sufferer, until he has gradually acquired confident control from the circumstances which provoke in him the causative emotional disturbance."

This the L.C.C. attains by putting the children in classes where they can see others who have overcome their difficulty; by studying their psychology; by helping them gradually to attain self-confidence, as well as by teaching them how to relax.

I do not know the reason for the increase of the number of hospital speech clinics which Mr. Rumsey states to be the case. Perhaps it is because every hospital thinks it should have one in much the same way as it has developed an orthopædic or neurological out-patients department. Nor do I know to what extent are these "speech clinics under the supervision of the medical staff." If they are under active supervision, it is time those in charge at Guy's and St. Bartholomew's conferred, because the speech therapist at the latter (C. MacMahon, M.A.Oxon., *Practitioner*, 1936, 136, 84) believes that—

"Stammering appears to be caused by an over-stimulation of that part of the brain that controls the motor nervous power of speech, and that the over-stimulation is caused by emotions of the mind, such as, in the child, pleasure and interest in things that it is observing and understanding. The primary over-stimulation is grossly aggravated by the wrongful physical efforts to free the speech. As the child gets older, bad emotions of anxiety, fear, and sometimes anger occur, and further developments arise, such as various well-known habit spasms."

Perhaps what the stammerer wants more than anything else is to know that his mentor is absolutely confident that he can cure the stammer, and it is high time that there was more agreement about the ideal method of treatment.

Yours, etc.,

R. E. SMITH.

3, Horton Crescent,
Rugby.

Table Tennis

To the Editor of the GAZETTE

SIR,—I should like to add a subsidiary notice to the one posted in the Hospital to-day, in which the removal of the two table tennis tables from the Pavy Gymnasium was announced.

The experiment of pandering to the many requests of students for table tennis amenities in the Hospital itself has proved a failure, at any rate for the time being. There are two reasons for this. One is the great shortage of space; this drawback was overcome during the summer months by the kindness of the Pavy Gymnasium Committee, who unofficially granted permission for the housing of the tables in the "Gym.," on the natural understanding that proper regard would be taken for the various properties in the place. During the winter the whole space is used every evening by the members of the Fencing, Boxing and Jiu-Jitsu Clubs, and it is obvious that it is not really adequate even for them.

The other reason is due to the thoughtlessness of some of those either playing, waiting for, or watching serious table tennis or friendly ping-pong. It appears that considerable damage has been done during the last few months to several places in the "Gym.," such as the lockers and the floor-boards of the new boxing ring. That such an extraordinary spirit of "hooliganism" should persist in anyone over the preparatory school age is scarcely credible, but it appears an undeniable and regrettable fact that some persons have been allowed into the Hospital who have no idea as to when and where to indulge in "horse-play." It has therefore been impossible for the Pavy Gymnasium Committee even to consider

the possibilities of allowing the tables to be erected daily for use during the morning and afternoon. The clubs constituting the Pavy Gymnasium have every justification to be jealous of their rights, and this fact is even more substantiated by the present keenness and excellence of the Fencing and Boxing Clubs, who have to be congratulated on their various successes during the last few seasons.

The provision of the tables has, I think, been popular—and this not only with the junior, but with the more senior members, of the Clubs' Union. It is hoped that, when the chaos of the new building projects has subsided, suitable room may be found, either in the new block or in one of the old vacated store-rooms. It seems that only then will it be possible to make provision for both serious and friendly games to be played by all and sundry without upsetting other persons.

Yours, etc.,

I. G. ROBIN,
Hon. Secretary,
Clubs' Union Council.

Guy's Hospital,
S.E.1.

A National Dental Students' Society

To the Editor of the GAZETTE

SIR,—The Edinburgh Dental Students' Society recently suggested that a National Dental Students' Society would be a benefit to the dental hospitals of England and Scotland, in order to promote inter-hospital friendship and co-operation both from an academic and social point of view.

At a luncheon at the Edinburgh University on February the 5th last, to which representatives of all the dental hospitals of England and Scotland were invited, it was decided, in order to minimise travelling expenses, to divide the Society into three separate branches :—

(*a*) North, consisting of Scotland and Newcastle.
(*b*) Midland.
(*c*) London.

A meeting of the secretaries of the several dental societies of the London hospitals was therefore held on April the 22nd last, at which it was decided that the secretary and treasurer of the new Society should be taken in alphabetical order of the hospitals, which meant that Guy's was honoured by being the first.

At a second meeting the secretaries and treasurers of the dental societies of the London hospitals decided :—

(*a*) That the President and Secretary of the Society should be members of one and the same hospital.
(*b*) That a social function should be arranged to raise funds in order—
(*c*) That an academic function could take place later on.

Upon these decisions, therefore, Mr. W. F. Herbert, L.R.C.P., M.R.C.S., L.D.S. R.C.S.Eng. was elected the President of the Society for the year 1937-38.

Also a Ball is to be arranged, notice of which will appear later in the *Gazette*.

We do appeal to all Guy's dental men, both past and present, to support this new society in every way, not only because Guy's has the honour of the first year's Presidency, but also because each individual man can do so much to promote inter-hospital fraternity, which at the moment is lacking.

Yours, etc.,

MONTAGU MALLESON,
Hon. Secretary.

Guy's Hospital, S.E.1.

Ice Hockey

To the Editor of the GAZETTE

SIR,—Those interested in Ice Hockey will be pleased to hear that an Inter-Hospital Cup has been offered by Sir Arthur Stanley, of St. Thomas's.

This season therefore promises to be one of even greater interest to the Hospital as a whole as St. Thomas's have a formidable team and the Cup matches will be keenly contested.

We are practising twice a week this year at Harringay Arena, Manor House. Anyone requiring information or wishing to play ice hockey will find me in the Dental School.

Yours, etc.,

J. W. LEE,
Hon. Secretary,
Ice Hockey Club.

Guy's Hospital,
S.E.1.

Ladies' Association Produce Sale

To the Editor of the GAZETTE

SIR,—May I draw the attention of your readers to the large poster now appearing in and around the Hospital advertising the Produce Sale to be held by the Ladies' Association in the Chapter House, St. Thomas's Street, next Thursday, October 14th, from 10.30 to 7 o'clock.

At this sale we hope to offer everything that is really worth eating, from game (well hung) to cream (really fresh). We do not implore your readers to support us; we advise them to come early before the best has gone.

We feel certain that once inside the door they will be unable to retire until their string bags (obtainable on the spot) are really well filled.

Yours, etc.,

BARBARA BOLAND,
Hon. Secretary,
Guy's Hospital Ladies' Association.

Sport and Other News

Rugby

Guy's v. Catford Bridge

ON Saturday, September 18th, Guy's started the season with a home game against their old neighbours Catford Bridge, and were successful by 5 placed goals and a try (28 points) to 2 tries (6 points).

Neither side were at full strength—four members of last year's fifteen were missing from the Guy's team, and to complete the side R. D. Plowman was given his opportunity at full-back and G. S. A. Sechiari was included in the pack.

Although the opposition was not particularly strong, the form shown in this match was most encouraging, and, barring accidents, Guy's should have a much better season.

The Hospital was superior in every department, but, although the visitors' forwards put up a hard fight, they very seldom obtained the ball in the set scrums owing to the magnificent hooking of Nicholson, the Hospital Captain, who was at his best.

The combination of Dick and Crawford was perfect; they had a splendid understanding and were a continual source of trouble to Catford's defence.

Catford were rather handicapped in the first half with the sun in their faces, and Guy's, who attacked from the start, established a lead of seventeen points at the interval.

Within five minutes the Hospital took the lead as the result of a great effort by Dick, who cut through and made an opening for Allen who sent in Douglas for a good try, which Dick converted with a fine kick from near the touch-line.

Guy's forced Catford to remain on the defensive, and after they had touched down Baxter made a good run on the right, cross-kicked and Sechiari just managed to touch down for a try, which Plowman improved.

Stung by this reverse, Catford made determined efforts to score, and eventually a brilliant bout of passing was finished by Calver, who ran through the Hospital defence and scored behind the posts, but Pickmere struck the cross-bar in trying to convert.

With both teams throwing the ball about, the game was fast and interesting. Catford's forwards attacked in the Hospital's 25, but Plowman sent them back and Allen, after side-stepping two opponents, passed to Crawford, who found touch in the corner. Several scrums followed, but eventually the visitors managed to clear, but the Guy's pack attacked vigorously and carried the ball to their opponents' goal-line when a knock-on spoilt a good opening.

However, Guy's could not be subdued, and, following another forward rush, Crawford picked up in the loose and ran in for a try, which Dick converted after no charge had been given.

Guy's had a narrow escape when Boty slipped past Allen and looked a certain scorer, but Crawford raced up and brought off a glorious tackle, and Plowman managed to find touch.

With a minute to go for half-time, Guy's scored again—after Stowell, the Catford full-back, had misfielded the ball, Crawford whipped out a pass to Allen, who ran in behind the posts for Dick to add the goal points.

Although they had such a commanding lead, Guy's did not relax their efforts, and immediately after the interval Crawford made a splendid opening for Allen, but his pass to Dick was just a fraction too late. Crawford followed this with another great effort when he completely deceived his opposite number, passed to Dick, who was travelling very fast, and the latter finished the movement with an excellent try behind the posts, which he converted himself.

Catford were by no means finished and, ably led by Mortimore, they stormed the Hospital line, and their efforts were rewarded when James scored an unconverted try. A little later they nearly scored again, when Calver cut through the centre, but when faced by Plowman he kicked ahead a

trifle too hard and the ball rolled over the dead-ball line.

After this, Guy's rallied and, following several promising movements, Baxter made a brilliant run from midfield, handed off the full-back, and scored an unconverted try in the corner.

Team.—R. D. Plowman; A. B. Baxter, R. C. S. Dick, R. D. Allen, D. M. Douglas; J. P. Crawford, J. W. Lewis; H. H. Crabb, E. S. Nicholson (Capt.), P. J. F. Fletcher, J. R. D. Williams, R. O. Yerbury, G. P. A. Sechiari, C. F. Ziervogel.

Guy's v. Coventry

VISITING Coventry on Saturday, September 25th, Guy's met with a heavy reverse and, after a hard-fought game, were defeated by 3 placed goals, a dropped goal, a penalty goal and 4 tries (34 points) to a penalty goal and a try (6 points).

Although beaten by such a wide margin of points, the Hospital put up a fine fight, and had far more of the game than the score suggests.

For the first time this season Coventry were able to field their strongest team, and, with the exception that G. Morris took the place of Sechiari (injured) in the pack, Guy's relied upon the side which was successful in the opening game.

The Hospital started promisingly, and a nice movement broke down through a knock-on, and soon after Dick made plenty of ground before he was forced into touch by Kaye.

Coventry forced Guy's back to their 25, and from a line-out Giles and Kenyon began a passing movement which sent the ball to the opposite wing, but Baxter succeeded in preventing Mark from crossing. However, the home side continued to press, and eventually Giles slipped away from a scrum and scored behind the posts for Harris to convert. Guy's retaliated immediately, and from near the touch-line Dick kicked a splendid penalty goal.

A ragged attack by Coventry developed and ended in Daniels securing the ball and running in for a try near the corner.

So far the game had been fairly even and, with the Hospital backs marking accurately, the home backs found it difficult to make much progress. A splendid individual effort by Kenyon enabled Coventry to increase their lead. Receiving the ball from a line-out on the 25 line, he deceived the Hospital defence by putting in a short punt over the heads of the three-quarters, followed up and gathered to score a try behind the posts, which Harris converted.

Giles and Kenyon, the halves, worked admirably together and combined perfectly. Although Guy's were playing very well, they could not stop the home forwards, who were very fast and took part in a number of passing movements. Following one of these attacks, Kaye received 20 yards out and managed to race over the line near the corner flag, but Harris failed to convert after no charge had been given.

After the interval Coventry attacked strongly, and Giles broke clean away and passed to Kenyon. The latter ran through to ground the ball under the posts, just as the referee blew his whistle to award a penalty in favour of Guy's ten yards out.

However, within the next few minutes Coventry added another eight points to their score. First Kenyon made a capital opening for Mark, who outstripped the Hospital defence and scored behind the posts, and Kenyon repeated the effort almost immediately, but only one of the tries was converted.

A little later, Giles kicked a penalty from 30 yards' range, but, although they were so heavily in arrears, Guy's attacked strongly and carried play well into Coventry territory. The ball was transferred rapidly along the back division until it reached Dick, who made a grand effort to break through, but was tackled by Mark about ten yards out. However, he sent out a low pass to Baxter, who ran in for a thoroughly deserved try in the corner.

Coventry were soon back on the attack, and Guy's were compelled to concentrate on defence. Near the end Nicol ran in for an unconverted try and, following a terrific onslaught in which the forwards and backs joined in, the ball reached Harris, who dropped a goal from 30 yards out.

Team.—R. D. Plowman; A. B. Baxter, R. D. Allen, R. C. S. Dick, D. M. Douglas; J. P. Crawford, J. W. Lewis; P. Fletcher, E. S. Nicholson (Capt.), H. H. Crabb, A. Forbes, J. R. D. Williams, C. F. Ziervogel, R. O. Yerbury, G. Morris.

Association

GUY'S *v.* METROPOLITAN POLICE COLLEGE

THE Hospital started the season on Saturday, September 25th, with a very convincing win over the Police. It was noticeable in this game that individualism had to a certain extent been abandoned in favour of team-work and the result proves the wisdom of this change.

The Hospital began in fine style, the game for the first twenty minutes being entirely in the Police half. Owing to it being the first game of the season it is perhaps excusable that more goals were not scored. In spite of this, Drew and Rees were both unlucky, the latter

hitting the bar with a fine first-time effort. Dorr, the new Captain, had very hard luck in a goal-mouth scrimmage, the ball hitting the goalkeeper as he was on the ground and bouncing clear. Eventually Dorr managed to finish off a centre from Sprigings to give Guy's the lead. This was after half an hour's play; from then until half-time the Hospital play deteriorated, and it was only good work by Heap and Lee that kept the Police out.

The second half started exactly as the first, one attack after another coming until eventually Dorr scored again to make the total 2—0.

The Police began to make ground again, but Stebbings in goal, in his first game for the Hospital, was more than safe. Soon after this Lee had very hard luck with a clever lob, the back heading the ball off the line with the goalkeeper out of position.

Towards the end of the match it was noticeable that the Hospital were playing harder and faster than when they started. If the team keeps up this form and takes advantages of the new training facilities which are available they may at last be able to do something they have not done for five years—win the Inter-Hospitals' Cup.

Hockey

SIX-A-SIDE TOURNAMENT, WORTHING

GUY'S opened the season at the annual Worthing Six-a-Side Tournament, when an auspicious start was made. This very successful tournament is arranged on knock-out lines, each match lasting six minutes each way, with no interval. Since the pitch used is full size, the games are more open, faster, and far more strenuous. Sixty-four teams took part, and Guy's participated in three matches, thus getting to the last sixteen.

Results.—

Against South Saxons, won 5—0.
Against Fareham, won 3—1.
Against Herts Wanderers, lost by 1 long corner to nil.

South Saxons were no match for a forward line which was speedy and showed good combination. Our opponents only had one shot at the Guy's goal, and consequently our defence had little to do. Fareham put up a much greater resistance, and a fast and good game of hockey was seen. Our forwards again played well, and the defence was more than efficient. The game with Herts Wanderers did not produce such good hockey, both teams showing signs of physical distress. As no goals were scored, victory was awarded to the side with the greatest number of corners to its credit. We were unlucky to lose on this account, since we had more of the play than our opponents. After two strenuous matches, the Guy's forwards were rather tired, and were ineffective against a strong defence. Our defence was also handicapped by an injury to Greene during the game.

Team.—J. S. Astbury; T. C. Thorne, A. C. Greene; D. G. E. Roberts, E. J. Martin, J. B. Franklin (captain).

E. J. M.

Golf

GUY'S *v.* MIDDLESEX

THIS match was played at West Hill on Thursday, 30th September, in perfect weather. Guy's were not, however, at full strength, for R. D. Allen and S. M. Whitteridge were unfortunately absentees, but, as things turned out, it made no difference. Foursomes were played before lunch and resulted in each side winning two games, but afterwards, fortified by the excellent lunch with which West Hill always provide us, we proved too strong for our opponents, winning six of the eight matches, the final result being 8—4 in our favour.

Individual results were as follows :—

Guy's		*Middlesex*	
B. C. M. Read (Capt.) & J. Drybrough-Smith	0	A. J. May & F. L. Dickson (3/2)	1
G. France & P. Wilson (5/4)	1	N. J. Heigger (Capt.) & F. S. Richardson	0
T. N. Praat & J. C. Ritchie (4/3)	1	N. E. Montennis & G. L. Stumbles	0
P. D. Spooner & K. S. MacLean	0	J. C. Townley & N. M. Thomas (2 holes)	1
B. C. M. Read	0	F. L. Dickson (3/2)	1
G. G. France	0	A. J. May (1 hole)	1
P. Wilson (3/2)	1	N. J. Heigger	0
J. Drybrough-Smith (5/4)	1	N. E. Montennis	0
J. C. Ritchie (3/2)	1	F. S. Richardson	0
T. N. Praat (3/2)	1	J. C. Townley	0
P. D. Spooner (3/2)	1	N. M. Thomas	0
K. S. MacLean (5/3)	1	G. L. Stumbles	0
Total	8	Total	4

Officers' Training Corps

UNIVERSITY OF LONDON O.T.C. MEDICAL UNIT

ANNUAL CAMP, 1937

THE camp this year was held near Swanage in conjunction with the Infantry Unit, and the arrival of the main party was greeted by a grey, wet day. The troops were pleased enough with the camp site and the camp itself, the canteen and messing arrangements especially being an improvement on former years. Even if the situation of the con. (not altogether mod.) was at the top of a small hill the view obtained therefrom was worth the climb; neither were the troops unduly worried by the fact that certain fly-proof earthworks were commanded from the adjacent golf course.

It is rather unfortunate for the Medical Unit that annual camp is always held during the last fortnight in July owing to the reprehensible habit of holding examinations at this time of the year, which is reputed, on rather obscure grounds perhaps, to be the cream of the English summer. In spite of this regrettable lapse on the part of the academicians concerned, out of the sixty-eight members of the unit from Guy's, forty-nine were able to put in the ten days at camp necessary to make them efficient for the year, and ten were able satisfactorily to account for themselves on " Blue Forms " or medical certificates.

The first week passed quickly and was spent in routine training. The fact that there was only one failure out of those entering from the company for the practical examinations for certificates A and B speaks for itself concerning the amount of work that was got through in that time. For those who had passed the examinations a varied programme of lectures, demonstrations, physical training and practical work was arranged. To a casual observer part of this morning routine seemed to be taken up by a course whose title might well have been " A Hundred and One Ways of Negotiating a Five-barred Gate." This gate was not a popular feature with the P.B.I., as it was erected in a position that encroached on both their parade ground and car park, the gymnastic displays thereon distracting from the solemnity of their battalion parades, which often occurred at the same time.

The field day, on which a certain amount of preliminary work was spent, was held during the second week of camp and differed from those of previous years in that the " warfare " was of the type that the best countries seem to be arranging for the future. The Medical Unit functioned as a Field Ambulance attached to a division, and, in addition, provided the personnel for three regimental aid posts. Its task was to evacuate the casualties from an imaginary invading force, consisting of one division, which advanced without much opposition, encountered and overcame resistance, and then moved on again. All this meant that the medical organisation had to keep on the move instead of settling down and having lunch and waiting for the inspecting officer to come along. Thanks to good staff work this august gentleman saw things before and after the advance, when the line of evacuation was recognisable in its textbook form. Even with the limited transport available it was clear that a Field Ambulance can, in its present form, function as a mobile unit—a lesson well worth learning.

The weather, so unpropitious at first, showed a complete change of face on the last day, when a trip was made by coach to Portland. The naval hospital was visited in the morning, followed by lunch and a glorious bathe from Portland Bill. The afternoon was spent in the dockyard and a destroyer and two submarines were inspected. The latter were said to be the oldest in commission, and we were not incredulous.

Owing to what was possibly a slight oversight, the fluid intake of the troops on this gorgeous day was nil over a period of about eight hours, and the restraint which they showed under these circumstances when visiting the officers' club late in the afternoon only serves to emphasise the fact that the old adage, " Officer cadet and almost a gentleman," is indeed justified. Even the sergeants waited their turn.

As far as No. 3 Company is concerned it only remains to congratulate those who turned up to camp on a good show, and no doubt they will agree. For the rest, the strength of the Medical Unit is 400, and there is a waiting list. On the 1st October those on the waiting list will be taken on the strength and there will be a few vacancies. As company strength goes on a principle of first come first served, until the total for the unit is reached, it is up to Guy's men (and not only those coming up in October) to see that Guy's still turns out the strongest company.

The Editor will, at all times be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Entry of Students, October, 1937

Medical

Name	*School or College*	*Year*
Babrow, L.	University of Cape Town	4th Year.
Banks, A. W.	City of London	1st M.B.
Barker, H. A.	Forest School, Snaresbrook	1st M.B.
Bishop, N. I.	Hymer's College, Hull	1st M.B.
Bromley, J.	Epsom	1st Year.
Brown, H. M.	Cowbridge Grammar, Glam.	1st M.B.
Carruthers, A. S.	Uppingham	1st Year.
Coates, K. R. J.	Dean Close, Cheltenham	1st M.B.
Cook, E. G.	Wallington County	1st M.B.
Coupland, G. M.	Tonbridge	1st M.B.
Crittenden, F. K.	Rugby	1st Year.
Cutler, M. J.	Wrekin College, Wellington	1st M.B.
Davis, D. P.	Braintree County High School	1st Year.
Dixon, D. G.	Tewkesbury Grammar	1st Year.
Doyle, J. T.	Caterham	1st M.B.
Dunn, F. M.	Dover County	1st M.B.
Eakin, J. A.	Wellington	1st M.B.
Earle, A. M.	King's College, Auckland, New Zealand	1st M.B.
Enderby, G. E. H.	St. John's, Cambridge	4th Year.
Evans, G. M.	Emmanuel	1st M.B.
Fiducia, C.	Emmanuel	1st M.B.
Filose, M. A.	Polytechnic, Regent Street	1st M.B.
Fuller, D. N.	University of Cape Town	4th Year.
Gordon, J.	Clare College, Cambridge	4th Year.
Gough, R. A.	Cowbridge Grammar, Glam.	1st Year.
Grene, J. D.	De La Salle, Blackheath	1st Year.
Griffin, B. P.	Sidney Sussex, Cambridge	4th Year.
Haden, P.	Clare College, Cambridge	4th Year.
Haigh, W.	Southall County	1st Year.
Henderson, I. D.	Fettes	1st M.B.
Humphreys, W. H.	Llanfair County	1st M.B.
Jackson, D. M.	Clare College, Cambridge	4th Year.
Jonathan, O. M.	Towyn County School	1st M.B.
Keates, M. D.	Alleyn's	1st M.B.
Keong, S.	St. John's, Cambridge	4th Year.
King, D. H.	Berkhampstead	1st Year.
Leverton, J. C. S.	Epsom	1st M.B.
Lewin, B.	Brighton Municipal College	1st M.B.
Lewis, K.	Clapham College	1st M.B.
Littler, N. P. W.	University College	1st Year.
MacLeod, I. S.	Wallington County	1st M.B.
Manning, I. G.	Scots College, South Australia	1st M.B.
Marsh, S. A.	Felsted	1st M.B.
Martindale, V. H.	Caterham	1st Year.
Mason, D. R. I.	Lancing	1st M.B.
Masters, P. L.	Alleyn's	1st Year.
Maxted, P. B.	Epsom	1st Year.
Miller, L. F.	Colfe's Grammar	1st Year.
Moorhouse, A. T.	Lancaster Royal Grammar	1st Year.
Morse, A. V.	Gowerton County	1st M.B.
Morris, P. B.	St. John's, Leatherhead	1st M.B.
Mukerji, H. C.	India	1st Year.
Obott, G. E. H.	Latymer, Edmonton	1st Year.
Oldham, A. J. P.	Brighton	1st M.B.

Name	*School or College*	*Year*
Parkinson, A. C.	Giggleswick	1st Year.
Paulett, J. D.	Quarry Bank High School, Liverpool	1st M.B.
Ray, R. L.	Charterhouse	1st M.B.
Reeves, T. L.	Tonbridge	1st M.B.
Rochford, J. P.	Christ Church, Oxford	4th Year.
Rockett, J. H.	Brighton	1st M.B.
Rogers, J. H. L.	Corpus Christi, Cambridge	4th Year.
Sherwood, M. P.	Queen's, Cambridge	4th Year.
Shillitoe, A. J.	Rugby	1st M.B.
Sichel, G. R. M.	Haberdashers' Aske's, Hampstead	1st M.B.
Smith, E. H. O.	Portsmouth Municipal College	1st Year.
Stephens, B. J.	Cardiff High School	1st Year.
Stevens, W. J.	Gravesend County	1st Year.
Strang, R. P.	Trinity, Cambridge	4th Year.
Sutton, R. V.	Raines Foundation	1st M.B.
Thomas, G. T.	Caius, Cambridge	4th Year.
Thomas, M.	St. Dunstan's	1st M.B.
Williams, E. A.	Llandiloes County	1st M.B.
Williams, O. H. E.	Barmouth County	1st M.B.
Woodside, R. M.	Queen Elizabeth Grammar, Mansfield	1st M.B.

Dental

Name	*School or College*	*Year*
Birtwhistle, T. D.	Monkton Combe	1st B.D.S.
Bharucha, B. A.	University of Pennsylvania	4th Year.
Blockley, S. E.	Haberdashers' Aske's, Hampstead	Pre-Medical.
Boutwood, P. R. W.	Leys School, Cambridge	Pre-Medical.
Brown, H. H.	Taunton School, Southampton	1st Year.
Cocker, G. L.	Hendon County	Pre-Medical.
Cohen, H.	Hackney Downs	Pre-Medical.
Cullingford, H. L. P.	Henry Thornton, Clapham	1st Year.
Davie, A. S.	St. Andrew's University	3rd Year.
Denney, J. A.	Woking County	Pre-Medical.
Dyas, A. A.	Bootham School, York	1st Year.
Emslie, R. D.	Felsted	Pre-Medical.
Fox, M. A.	Beaumont	1st B.D.S.
Gillies, R. M.	Highgate	Pre-Medical.
Hancock, T. J.	Cardiff High School	1st Year.
Hone, D. R.	Haileybury	Pre-Medical.
Hyman, R. E.	Central Foundation	Pre-Medical.
Illing, R. B.	Whitgift	1st B.D.S.
Jackson, G. G.	Leighton Park School, Reading	Pre-Medical.
Jerichower, E. S.	Chelsea Polytechnic	1st Year.
Jowett, F. H.	Caterham	Pre-Medical.
Knight, J. H. H.	Charterhouse	1st B.D.S.
Lawrence, R. C.	Alleyn's	1st B.D.S.
Lee, N. A.	Highgate	1st B.D.S.
Legg, J. O.	Eastbourne	1st Year.
Lewis, R. P.	Leyton County High School	Pre-Medical.
McLellan, N. H.	Queensland University, Australia	4th Year
Matthews, J. R. C.	Sutton Valence	Pre-Medical.
McKechnie, I. E.	Loretto	Pre-Medical.
Meech, G. E.	Weymouth College	Pre-Medical.
Messenger, K. G.	Felsted	1st B.D.S.
Miller, H. C.	Highgate	1st B.D.S.
Morris, T. A.	Manchester Grammar	1st B.D.S.
Norman, D. H.	Acton Technical College	1st B.D.S.
Ogden, J. K.	Sandbach, Cheshire	Pre-Medical.

Name	School or College	Year
Palowker, H. W.	Reigate Grammar	1st B.D.S.
Payne, D. A. T.	Highgate	1st Year.
Pearson, P. F.	Queen Elizabeth, Barnet	1st Year.
Pett, B. W.	Brighton	1st B.D.S.
Punt, N. A.	Dulwich	1st Year.
Reis, A. H.	London Hospital	4th Year.
Ross, A.	Bromley County School	1st Year.
Schuler, L. H.	Felsted	Pre-Medical.
Scott, N. L.	Dover College	1st Year.
Sofer, H.	Perse School, Cambridge	Pre-Medical.
Staniforth, J. N.	Wycliffe College, Glos.	1st B.D.S.
Stark, N.	Hackney Downs Secondary	1st Year.
Stephens, J. W.	Whitgift Middle	1st Year.
Steven, D. C.	Bedford School	Pre-Medical.
Turner, J. S. B.	Bromsgrove	Pre-Medical.
Vann, R. N. H.	Northampton Town and County	Pre-Medical.
Vincent, G. W.	Queensland University, Canada	4th Year.
Walters, A. J.	Epsom	1st Year.
Wilshere, B. H.	Malvern	1st B.D.S.

Hospital Information, etc.

Preliminary Notice

An Amateur Boxing Tournament is to be held in aid of Guy's Hospital at the Holborn Stadium Club on Friday, 12th November, 1937, at 7.30 p.m. between London University and United Hospitals, with supporting special bouts.

Tickets obtainable from the Appeal Secretary, Guy's Hospital.

Papers by Guy's Men

Min Sein. A case of lead encephalopathy. *Indian Med. Gaz.*, 1937, lxxii, 420.

T. F. Todd. Two cases of carcinoma of the cervix complicating procidentia uteri. *Proc. Roy. Soc. Med.*, 1937, xxx, 1343 (Sect. Obst. and Gynæcol.).

—— Procidentia recti present for twenty-three years and cured by operation. *Ibid.*, 1344.

S. M. Whitteridge. Benign lymphogranuloma. *Ibid.*, 1329.

Changes of Address

J. W. Shackle, 53, Green Street, Park Lane, W.1. *Mayfair* 6080 and *Primrose* 2728. Private address unchanged.

L. B. Hilton, L.D.S., 48, Belmont Hill, S.E.13, until December, 1937; thereafter P.O. Box 875, Nairobi, Kenya.

Births

CARDEW.—On September 29th, 1937, at Tyrrell's Wood, Leatherhead, to Dorothy Mary Louise, wife of H. B. O. Cardew—a daughter.

MANSIE.—On September 15th, 1937, at 14, Carlton Road, Putney, to Enid (née Kirkpatrick), wife of James Mansie—a son.

Marriage

DOHERTY—STEPHENSON.—On June 9th, 1937, at Johannesburg, South Africa, Gerald Vincent Walshe Doherty, M.R.C.S.(Eng.), L.R.C.P.(Lond.), to Anita Marie Stephenson, of Newtown House, Kilmeaden, Co. Waterford, Ireland.

Death

DUFFETT.—On August 26th, 1907, at Sidcup, Henry Allcroft Duffett, F.R.C.S.Eng.

EDS. { A.G.W.H. / H.B.O.C.

MEDICAL SCHOOL TIME TABLE, WINTER TERM, 1937.

CHEMISTRY, PHYSICS AND BIOLOGY.

Course	Subject	Lectures	Place	Practical Classes	Place
Pre-Medical Conjoint	Inorganic Chemistry	Tues. & Thurs. 10 a.m. First Lecture, Thurs., Oct. 7, at 10 a.m.	Chemistry Theatre	Thurs. 2–5 p.m. Fri. 10–1 p.m. First Class, Thurs., Oct. 7, at 2 p.m.	Chemistry Laboratory
	*Elementary Organic Chemistry	Thurs. 2–3 p.m. & Fri. 12–1 p.m. First Lecture, Thurs., Oct. 14 at 2 p.m.	Chemistry Theatre		
	Physics	Tues. & Thurs. 11 a.m. and Tues. at 12 noon. First Lecture, Thurs., Oct. 7, at 11 a.m.	Anatomical Thatre	Mons. 10–1 p.m. and 2–5 p.m. First Class, Mon., Oct. 11 at 10 a.m.	Physics Laboratory
	Biology	Weds. 9.30 a.m., Thurs. 12 noon, Sat. at 9.30 a.m. First Lecture, Thurs., Oct. 7 at 12 noon.	Anatomical Theatre Physiological Theatre	Tues. and Fri. 2–4 p.m. First Class, Fri., Oct. 8, at 2 p.m.	Biology Laboratory

Course	Subject	Lectures	Place	Practical Classes	Place
M.B. London	Chemistry	Tues. & Thurs. 10 a.m. First Lecture, Thurs., Oct. 7, at 10 a.m.	Chemistry Theatre	Mons. 10–1 p.m., Tues. 2–5 p.m. First Class, Tues., Oct. 5, at 2 p.m.	Chemistry Laboratory
	Physics	Tues. & Thurs. 11 a.m., and Tues. at 12 noon. First Lecture, Thurs., Oct. 7, at 11 a.m.	Anatomical Theatre	Thurs. and Fridays 2–5 p.m. First Class, Thurs. Oct. 7. at 2 p.m.	Physics Laboratory
	Biology	Weds.9.30a.m., Thurs.12 noon, Sat., 9.30 a.m. First Lecture, Thurs., Oct. 7, at 12 noon.	Anatomical Theatre	Weds., Fridays & Sats. 10.30–1 p.m. First Class, Fri., Oct. 8, at 10.30 a.m.	Biology Laboratory

* Only for those Students taking the Pre-Medical Examination in December, 1937.

ORGANIC CHEMISTRY, ANATOMY, PHYSIOLOGY, AND PHARMACOLOGY.

Subject	Days and Times	Place	First Class or Lecture
Organic Chemistry (2nd M.B., Part I)	Lectures—Mons. 1.45, Weds. 10.45 a.m. Pract.–Mons. 2.45–5. Thurs. 10-1 p.m.	Chemistry Theatre Chemistry Laboratory	Lectures—Wed., October 6 Practical—Thur., October 7
Anatomy	Elementary Lectures— From Oct. 6–22 inclusive—Mon. 9.30 a.m., Tues. 4 p.m., Wed. 12 noon, Fri. 9.30 a.m. Thereafter—Wed. 10.30 a.m., Fri. 9.30 a.m.	Anatomical Theatre	Wednesday, October 6
	Senior Lectures (Neurology)— Tues. and Thurs. at 9.30 a.m.	Anatomical Theatre	Thursday, October 7
	Revision Classes— To be announced later	Demonstration Theatre	To be announced later
	Demonstrations— To be announced later	Demonstration Theatre	To be announced later
	Practical Anatomy— Daily from 9.30 a.m. to 5 p.m.	Dissecting Room	Tues., Oct. 5 at 10 a.m.
	Primary F.R.C.S.— See special notices on notice boards		
	Normal Histology Tues. at 2 p.m.	Histology Laboratory	Tuesday, October 12
Physiology	Elementary Lectures— Tues. and Thurs. 9.30 a.m.	Physiological Theatre	Tuesday, October 26
	Senior Lectures— Mon. 9.30 a.m., Wed. 10.30 a.m., Thurs. 2 p.m.	Physiological Theatre	Wednesday, October 6
	Elemen. Exper. Physiology (Jun. Students)— Tues. 10.30 a.m. to 12.30 p.m. and Tues. 2–4 p.m.	Experimental Physiology Laboratory	Tuesday, October 12 at 10.30 a.m.
	† Adv. Chemical Physiology (Sen. Students)— A Group, Mon, and Fri. 10.30–12.30. B Group, Mon. and Fri. 2–4 p.m.	Chemical Physiology Laboratory	Friday, October 8
	§Sen. Experimental (Sen. M.B. Students only)— B Group, Mon. 10.30–12.30 p.m. A Group, Mon. 2–4 p.m.	Experimental Physiology Laboratory	Monday, October 11
	Clinical Physiology (All Students in Final Six Months of Study)— Thurs. 12 noon to 1 p.m.	Clinical Theatre	Thursday, October 14
*Pharmacology	Lectures—Mons. 4 p.m. Fri. 1.15 p.m. Demonstrations Revision Classes — To be announced later.	Physiological Theatre Pharmacology Laboratory	Monday, October 11 To be announced later.

†Students will be arranged into their respective Groups at the First Senior Lecture.

*The classes in Practical Pharmacology for Oxford and Cambridge students only, will begin in the Pharmacology Laboratory in February, 1938.

§ All Senior M.B. Students are required to attend the Senior Experimental Physiology classes in place of the Practical Course in " Respiration " which has been postponed until the Spring Term, 1938.

SUBJECTS FOR FINAL EXAMINATION. MEDICAL.

Subject	Lecturer	Days and Times	Place	First Class or Lecture
Practical Pharmacy	Hospital Pharmacist	Fridays at 4.15 p.m.	Chemistry Theatre	Friday, October 15
Applied Anatomy	Professor Johnston	Wednesdays at 12 noon	Physiological Theatre	Wednesday, October 6
Forensic Medicine	Dr. Ryffel	Fridays at 4.30 p.m.	Class Room 3	Friday, October 8
General Pathology	Professor Wright	Lectures—Tues., Thurs. and Fridays at 12 noon Practical—Daily at 9 a.m.	Physiological Theatre Path. Class Room	Tuesday, October 19 Wednesday, October 20
Medical Pathology	Dr. Campbell	Thurs. at 9.30 a.m. and Fridays at 4 p.m.	Museum	Friday, October 8
Surgical Pathology	Mr. Davies-Colley	Mon. and Thurs. at 5 p.m.	Museum	Thursday, October 7
Operative Surgery	Mr. Massie	Mon. and Thurs. at 12 noon	Op. Surg Class Rm.	To be announced later
Ophthalmology	Mr. Morgan	Thursdays at 4 p.m.	Anatomical Theatre	Thursday, October 14
Radiology	Dr. Locke	Tuesdays at 4 p.m.	Physiological Theatre	Tuesday, October 12

DENTAL SCHOOL TIME TABLE, WINTER TERM, 1937.

*PRE-MEDICAL COURSE.

CHEMISTRY, PHYSICS AND BIOLOGY.

Subject	Lectures	Place	Practical	Place
INORGANIC CHEMISTRY	Tuesdays and Thursdays at 10 a.m., commencing on Thursday, October 7th.	Chemistry Theatre	Thursdays 2 to 5 p.m., and Fridays 10 a.m. to 1 p.m., commencing on Thursday, October 7th	Chemistry Laboratory
†ELEMENTARY ORGANIC CHEMISTRY	Thursdays at 2 p.m. and Fridays at 12 noon, commencing on Thursday, Oct. 14th.	Chemistry Theatre		
PHYSICS	Tuesdays and Thursdays at 11 a.m., and Tuesdays at 12 noon, commencing on Thursday, October 7th	Anatomical Theatre	Mondays 10 a.m. to 1 p.m., and 2 to 5 p.m., commencing on Monday, October 11th	Physics Laboratory
BIOLOGY	Wednesdays 9.30 a.m., Thursdays at 12 noon. Saturdays at 9.30 a.m. Commencing on Thurs. Oct. 7th	Anatomical Theatre Physiological Theatre	Tuesdays and Fridays 2 to 4 p.m., commencing on Friday, October 8th	Biology Laboratory

*B.D.S. Students see Medical Time-Table. †Only for Students taking the Pre-Medical Examination in Dec., 1937.

SUBJECTS FOR FIRST PROFESSIONAL EXAMINATION.

Subject	Lectures	Place	Practical	Place
ANATOMY	(1) *Junior Lectures*— From Oct. 6–22 inclusive Mondays 9.30 a.m., Wednesdays 10.30 a.m., Thursdays 2 p.m., Fridays, 9.30 a.m. Thereafter — Wednesdays 10.30 a.m., Fridays 9.30 a.m., commencing on Wednesday, October 6th. (2) *Demonstrations*— *(*a*) Bones— To be arranged later. *(*b*) Soft Parts— To be arranged later.	Anatomical Theatre Anatomy Demonstration Theatre Anatomy Demonstration Theatre	Additional demonstrations will be arranged to take the place of Practical work.	Anatomy Demonstration Theatre
PHYSIOLOGY	Tuesdays and Thursdays 9.30 a.m., commencing on Tuesday, October 26th.	Physiological Theatre	Thursdays 10.30 a.m. to 12.30 p.m., commencing on October 7th	Experimental Physiology Laboratory
HISTOLOGY	Thursdays at 2 p.m., commencing on October 14th.	Histology Laboratory		
†DENTAL METALLURGY ..	Mondays and Wednesdays at 9.30 a.m., commencing on Monday, October 11th.	Chemistry Theatre		
†DENTAL PROSTHETICS	Fridays at 9.30 a.m., commencing on October 8th.	Pathological Theatre	Fridays at 1.45 p.m., commencing on October 8th	1st and 2nd Years' Laboratory
DENTAL ANATOMY ..	Thursdays at 2.15 p.m. commencing on October 14th.	On October 14th and 21st the Lecture will be given in the Pathological Theatre; thereafter in the Anatomical Theatre.		
NORMAL DENTAL HISTOLOGY ..	Tuesdays at 2 p.m., commencing on October 5th.	Pathological Theatre	Tuesdays at 2.30 p.m., commencing on October 5th	Pathological Class Room

* N.B. —Students in their Second Term of Human Anatomy must attend (*a*), and may attend (*b*) if they so desire.
Students in their Third Term of Human Anatomy must attend *both* (*a*) and (*b*).
† Only for Students taking the First Professional L.D.S. Examination, Part I, in February, 1938.

SUBJECTS FOR SECOND AND FINAL EXAMINATION

Subject	Lecturer	Days and Times	Place	First Class or Lecture
PATHOLOGY	Professor Wright	Lectures — Wednesdays at 12 noon Practical—Mondays at 3 p.m.	Pathological Theatre Pathological Class Room	Wednesday, October 6th. Monday, October 11th.
GENERAL SURGERY	Mr. Eckhoff	Mondays, Tuesdays, and Fridays at 1.15 p.m.	Clinical Theatre	Friday, October 8th.
DENTAL PATHO-HISTOLOGY ..	Mr. Pritchard	Lectures—Tuesdays at 2 p.m. Practical—Tuesdays at 2.30 p.m.	Pathological Theatre Pathological Class Room	Tuesday, November 16th. Tuesday, November 16th.
DENTAL SURGERY ..	Mr. Doubleday	Tuesdays at 9.15 a.m.	Pathological Theatre	Tuesday, October 5th.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

SOME weeks ago we heard the Prime Minister give by wireless the opening address of the new National Fitness Campaign. At the same time appeared in the daily press on this subject an advertisement by the British Medical Association—the first published, we believe, since its formation. This campaign has for its object the improvement of our national health and the establishment of "a fitter Britain," and constituted thus it should receive, one would like to think, the support of all concerned, however remotely, with the medical profession. We should be the last to doubt that it does, in fact, obtain this support, but we have been surprised to note at Guy's the entire absence of commentary, favourable or derogatory, on what must prove for us a very important subject. Apart from the general approval which everyone must accord to any effort directed to the betterment of the national physique, we cannot as medical men ignore the implication that as the country becomes increasingly health-conscious, so will the demand for our services tend to increase. We wish to ignore this special relationship and to consider some facets of this national campaign from a general non-medical standpoint.

Is it desirable that people shall become more health-conscious? Whether one likes it or no, one cannot ignore the fact that forces have been at work, particularly since the war, tending to make us increasingly aware of our corporeal estate. Two agencies especially are worthy of mention in this connection: these are the patent medicine advertising fraternity and, of more recent origin, the propagandists of the various totalitarian States. Now the question arises as to whether health may be rightly regarded as a positive thing to be sought after in the manner suggested by these persons. We would not presume to define the word *Health* to our readers, for we consider that it evades definition *per genus ad differentiam*, but we would suggest that it might be regarded as a state of the body, the product of a full belly and a contented mind, which enables a man to gratify his natural appetites and to go ahead with the business of living. This, it may be felt, is a very earthbound and unidealistic conception, which does not offer much scope to the reformer, but we would maintain as strongly as possible that in matters of health it is best to keep one's feet firmly on the ground and to eschew all vague idealistic notions. If we are to be sold *Health* we must make quite sure that there are no "tags" attached to it. We cannot feel as enthusiastic as some over the great youth movements seen on the Continent at the present time. Their object is proclaimed to be the physical improvement of the youth of the countries concerned. "Strength through joy" may be a fine-sounding and innocuous watchword, but there is little doubt that where arms and legs are regimented and move to numbers so, too, do the minds behind them, and this is just what the promoters of these movements want.

We sincerely hope that our "National Fitness Campaign" in England will be concerned only with the business of improving our bodies and will leave the mind severely alone. We have been warned that efforts will shortly be made to organise physical training centres all over the country, a step which must be regarded as admirable as long as it is confined to its announced objective. It is to be hoped, however, that we shall not be treated to the mass displays of "solidarity" so popular on the Continent, which, although harmless at first, tend soon to degenerate into exhibitions of flag-waving hysteria. We have in England a time-honoured and excellent custom, performed in the solitude of the bedroom before the open window, which is known as "the daily dozen." It is a strange ritual and one of which our totalitarian friends would not approve, for it is essentially a solitary procedure and not amenable to mass influence; it is, however, well suited to our

island tastes, and we venture to think that it should be encouraged.

There are many questions to be dealt with in the campaign other than physical training. It has long been realised that while we have in this country the finest National Health services in the world, these are not used to anything like the extent they should be, and a great effort is to be made to educate and inform the public and —dare we say it?—the general practitioner, in this direction. We may expect to witness an increasing stress laid on prophylactic measures and preventive medicine, and with this trend no one will quarrel.

There is, however, one factor for health which we fear will be neglected and which is, in our opinion, one of prime importance : we refer to the matter of food. We are without a doubt the worst fed nation in the world; in fact, our national kitchen is a disgrace. We display neither artistry nor ingenuity in our cooking, and to incompetence and Philistinism in the art of the *culina* we add the sin of wastefulness. Whereas our Gallic neighbours have invented some forty ways of serving potatoes, we confine ourselves to " baked, boiled or roast." The humblest French workman has with his lunch a salad and fruit all the year round. Here the labourer's mid-day meal consists of bread and cheese, and on returning home in the evening he is provided with a supper of tinned goods.

It is not a matter of wages or cost of living, for in both matters we have the advantage, but rather that in this country we regard the process of eating as an annoying business to be finished with as soon as possible, whereas in France it is considered an art about which infinite care and trouble must be exercised. Here, if economies must be made, they will be made first on food, and last on smoking, drinking and the cinema. In France every sacrifice will be made before the kitchen suffers, for the French realise that with a full and satisfied stomach one may present a brave face to a hard world.

That this matter has not altogether escaped the notice of the authorities is evidenced by the publication from time to time of tables of calorific contents of various foods and calorific requirements of men engaged in different occupations. Now this is all very proper and no doubt useful to the physiologists, but it entirely neglects the essential fact of appetite, and in matters of appetite it is true to say that the supply creates the demand. Presented by a hunk of stale bread and a slab of cheese, the calorific intake is likely to remain at zero, and *à propos* of this same question, Dr. Cameron is known to have remarked that it was worse than useless to pour a pint of rich cow's milk into a child at 11 o'clock in the morning if thereby one effectively removes his appetite for the mid-day meal. By all means let us see that everybody in the country obtains the requisite calorific fare. No one would deny the value of this, but let those concerned see to it that this step is not wasted, and this can be done by the proper education of our women folk in the science and supreme art of good cooking.

If the National Fitness Campaign is to fulfil its object it is essential that this question should not be overlooked, and we feel that in this direction will lie the most profitable results which could be obtained by a series of efforts to improve our national health.

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WITH great delight, and in scarcely more than a whisper because we still cannot believe that it is true, we bring you the joyous news that the Children's Ward is soon to be rebuilt.

It is now almost certain that the old Bright Ward will be reconstructed so as to form an up-to-date Children's Department, housing about forty cots, and provided with balconies for open-air treatment, and glass screens to minimise the risks of cross-infection.

However, the suggestion on the part of the architectural experts that these screens should be raised six inches from the floor so that brooms could sweep under them has, we understand, after due consideration been rejected.

Nevertheless, for the first time since we mentioned the subject of the Children's Ward in these columns, we really feel that something may soon be done, so rejoice with us, dear readers, and please rejoice loudly, lest the mind of the almighty ones be suddenly changed.

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DURING the past month, as readers may remember, we have made references in these columns to a recent attempt to form a Trade Union for Nurses, and expressed an opinion that such an organisation might conceivably fulfil a useful purpose.

These remarks seem to have aroused more than passing interest, and we have received many letters upon the subject, some in pleasant bantering terms, others more serious, and a few definitely hostile. Some of these letters were published in our last issue, and a further instalment we have included elsewhere in this number, with a sly hope that it may stimulate further correspondence; indeed, dear readers, for our sake, if not for yours, let us hope that this controversy may continue for many a day, and if, in all innocence, we have stirred up a hornet's nest, we pray that, at the same time, we shall have unmasked a certain truth.

". . . the daughter of my people is become cruel, like the ostriches in the wilderness."

So we read in the lamentations of Jeremiah, and we have often thought that many of the difficulties which confront the nursing profession to-day may have arisen from an obstinate refusal on the part of its leaders to face unpleasant realities and an attempt to hide their heads from facts behind a mass of minor reforms.

However, to return to our critics. It seems to us, in many ways significant, and in others most regrettable, that so far all the letters, which we have received dealing with this subject have come from one class of person only; that is to say, the rather more august members of the nursing profession, who have risen to high rank, and who now hold positions of authority.

For these letters we are most grateful, but from the lack of comment from, shall we say, the less exalted members, the underdogs, if you will, but in any case those who may be most directly concerned with any attempt at reform, it might well be inferred that they are quite indifferent to their own problems, or indeed that they are completely satisfied with conditions as they exist.

Reports and rumours, murmurings and whisperings, far beyond the tittle-tattle of our daily life, have led us to believe that this is not the case. We believe that grave reforms should be attempted, but, while we are in no way anxious to associate ourselves with any existing organisation for revolution, and have no intention of appearing as champions in the lists of any female struggle, we cannot help but lament the absence of any kind of comment from those among us who must be deeply interested in the suggestion of a trade union for nurses.

There need be no diffidence about writing to us. As we mentioned a fortnight ago, the cloak of anonymity will hide such blushes as there need be, and suitable pseudonyms are ready and waiting for the more timid of our readers.

Let us hope that before long we shall be able to represent both sides of this important problem from opinions other than our own.

From such letters as we have received, it will be seen that we are criticised, by some quite genially, if by others a little impolitely, upon two main points. First of all for having neglected the College of Nursing, when we discussed the possible advantages of a trade union, and secondly for our ignorance regarding the system by which the suggestions of nurses are directed to high authority at this hospital, namely, the Nurses' Representative Council.

Readers, we felt humbled when first we read those letters. Had we overlooked completely some giant organisation, working silently and ceaselessly in the interest of all nurses? Was this College of Nursing just the very thing which we had suggested, only of course much more dignified than ever a trade union could be?

Those were the questions which were in our minds, when, last week, we attempted to atone for our ignorance regarding the College of Nursing and acquire some facts as to its aims and capabilities.

However, if our pride had vanished, it was soon replaced by a feeling of mild surprise when we began our investigations. Quite a number of nurses, so it seemed, were completely unaware of the existence of the College, and, though a few knew where it was, and others a little about the rates of subscription, practically no idea of its scope or usefulness to the average nurse could be obtained from polite inquiry among those whom we presumed it set out to protect—a fact which awoke in our minds a suspicion that perhaps, after all, this College was not all that its champions would have us believe, for at any rate there seemed to be others who shared our ignorance.

Therefore, somewhat bewildered, we accepted an invitation which had been offered kindly to us, and visited No. 1*a*, Henrietta Street, where the College has its buildings.

Before going any further, we would like to say that during that visit we were treated with the utmost kindness and consideration, that no effort was spared in offering us such information as we desired, that great patience was shown in explaining the detailed workings of the organisation to us, and that, somewhat undeservedly we felt, we were entertained to a splendid tea.

For all that, and to Miss Moulton in particular, we are most grateful, but at the same time we must confess that, as we left the pleasant buildings of the College, with its air of feminine bustle and efficiency, the glorious ginger jam, and the sedan chair in the doorway, and sauntered homeward through the outskirts of the Cronin country, we felt that our suspicions had, at least, received some confirmation.

There is no shadow of doubt that the College of Nursing is, in many ways, an excellent institution, founded with the best of intentions, and capable of doing much good work, both on behalf of the nurses themselves and those who employ them, but, in our opinion, by its very constitution, it must find difficulty in sympathising with the grievances of its junior members, and as a force for protecting their interests, seems wholly inadequate.

Such a dogmatic statement as this last will, possibly, not pass unchallenged—and, indeed, we would welcome the views of others upon this question, since the more facts that are brought to light,

the greater will be the chance of effecting some improvement, but, broadly speaking, our accusation is supported by the following facts.

First of all, the total membership of the College, taking into account the number of nurses in the country, is not overwhelming, and, of that total, the Student Nurses section, which represents the nurses at present in training, is relatively very small indeed, and we have been told that it is only with difficulty that this class of nurse can be persuaded to join.

Various reasons were suggested to us to explain the reluctance of present-day Student Nurses to join the College, chief of which was the question of the subscription, which, though it seemed reasonable enough to us, was said to compete most unfavourably with the commoner forms of amusement, when nurses began to reckon the spending power of their salaries.

Such may be the case, and the argument that the College would be immeasurably more powerful if these girls would only think for a moment of their community and join that institution in vast numbers is undoubtedly true, but to our minds the converse is even more strikingly true, that if the College was organised upon more democratic lines, was more widely known, and was willing to make some effort to free the Student Nurses from some of the tyranny by which they are surrounded, then surely it would be worth while joining.

As it is, with its limited membership and rigid constitution, the College of Nursing, we feel, is quite unable to afford to nurses that power of protection which might be offered by a union formed upon the lines of other trade unions.

Another point, which we would make in support of our accusation is the relations, or, to be more accurate, the lack of relations, between this College and the London County Council, which must have in its employ a by no means negligible proportion of the nurses in this country. The London County Council, though professedly democratic in some ways, is surprisingly autocratic in others, and is notoriously difficult to deal with in any terms other than its own, but we must confess that we were astonished when we inquired as to how many of the Council's nurses joined the College, and as to whether more complaints were dealt with from these nurses or those training at the voluntary hospitals, to hear it stated that those in the Council's nursing service were, for the most part, distinctly nervous of making any complaint, possibly for fear of dismissal, and that because the London County Council was such a difficult body to get on with and did not permit of any inspection or visitation by the College, little or nothing could be done to help the nurses training under its care.

To us this seemed a most lamentable admission of weakness, and, by no means convinced that any attempt was being made to overcome the difficulty, it was with the deepest disappointment that we left the College of Nursing, forced to the conclusions which we have outlined above, and with the feeling that much remained to be done before it could be said that the interests of student nurses received adequate protection from the College.

So much for the College of Nursing, and now for the second point upon which we have been criticised, namely, that we have overlooked the Nurses' Representative Council at this Hospital in our former remarks.

It is true perhaps that this most useful and progressive institution does not receive all the credit that it deserves, but we are fully aware of its existence, of its constitution, and of its valuable work on behalf of Guy's nurses over a long period of years; indeed, we would go further and say that before long, partly, if not wholly, owing to the recommendations of the Nurses' Representative Council, far-reaching reforms of the conditions under which nurses work in this Hospital will be undertaken. These will include both a general reduction in the number of working hours per week and also, by the employment of more orderlies and theatre workers, a lessening of those duties which nurses now perform, and which are, no doubt, admirable for developing patience and efficiency, but which are not strictly part of the nursing curriculum.

This, indeed, is a sign of great progress, and we would congratulate all those concerned in its institution, but our critics must remember that all this only concerns one hospital, and that such a happy state of affairs unfortunately does not exist in many others, so that our remarks, which were made generally and meant to apply in the widest possible sense, are not greatly affected by the methods of reform of any one hospital, even if, as we feel sure it must, that hospital happens to be an example of wise administration.

Those, then, O most patient readers, are our views, and now we sit back in comfort, awaiting yours, but please do not misunderstand us.

We attack the College of Nursing because we think that it is inadequate in its work on behalf of Student Nurses, however praiseworthy it may be in other respects.

We do not offer support to any union of nurses, which may have been formed, but merely point out that, if the College is unable to represent the interests of Student Nurses, then it would be better for some other organisation to be formed,

and that it would be advantageous if it were constituted upon rather more democratic lines than the present institution.

ELSEWHERE will be found a review of the new edition of the now famous *Guy's Hospital Pharmacopœia*, for the appearance of which all will be grateful. It is twenty-one years since the last edition appeared, and this period has been productive of many changes, including, we note, the dropping of *Arsenic* from the list of poisons. Perhaps it was felt that with so much detective literature available at the present time any further information about this much-used poison would be superfluous.

We have not been able to ascertain what period may be expected to elapse before the publication of the next edition, but if precedent is of any indication, we may hazard a guess of some twenty years, and it would certainly be to the advantage of all users of the *Pharmacopœia* if they could be informed from time to time of new preparations in use at the Hospital, for twenty years is a very long time to wait in order to bring one's pharmacology up to date. It is realised, however, that the relatively small changes which would be made each year would not warrant the publication of new editions of the work.

Taking this into account we would suggest that a yearly addendum might be prepared for publication elsewhere. We should be pleased to publish in the *Gazette* some such addendum—and, indeed, an erratum—if it were thought desirable to produce it.

WHILE Fascists prance triumphantly before their diminutive, volcanic, and sometimes bullet-proof leader in Italy, and Storm Troops, Shock Troops and Labour Corps, complete with shovels, goose-step gaily in Germany, their English counterparts seem to have been enjoying somewhat less whole-hearted approval just lately.

Their leader, Sir Oswald Mosley, as readers may remember, made an appearance (if a somewhat egg-encrusted one) in the Borough a few Sundays ago, when he was the central figure in a little mild rudery among our own back streets. His reception at that time, and the evident intentions of his audience, which, so it seemed, had been especially augmented for the occasion, recalled to our minds the vulgar description of an unpopular tragedian, who, it was said, entered the stage as Hamlet and left it as Omelette.

However, while the more demonstrative of the folk in the Borough that day were content with eggs and tomatoes and a few fireworks, those in Liverpool seemed of sterner stuff, and we noticed with regret that Sir Oswald, having passed the length of Long Lane comparatively unharmed, though with no great dignity, was injured by a stone.

This was one of many thrown by his audience—a practice which, as our policeman friend Captain ffoolenough fflatfoot remarked, is carrying horse-play too far.

For ourselves, we are glad to see that Sir Oswald has now recovered; not that we have any sympathy with dream-a-day dictators—indeed, we still remember the late baronet's description of his son, but now perhaps those rude messages chalked upon the walls of Crosby Row may be erased, and the Borough remain undisturbed by (Blackshirts we must not mention), shall we say, the dark invader, for some time to come.

IT was late in August of this year when we found ourselves at Waterloo, surrounded by excited flappers, cameramen and autograph books.

We signed a few of these with polite indulgence, until we discovered that the crowd was not looking for us, nor had it come to look at Bournemouth in a glass case, but was awaiting the arrival of a film star, one Robert Taylor. We sneered and walked away and weighed ourselves, talking loudly of the folly of flappers and their inane worship of these film people. However, to our astonishment, we have lately learned that those flappers are not alone in their adulation of the stars, and recently a large number of students have acted as "extras," "hangers-on," "Yes-men," etc., in the making of a film at the Denham Studios, with this self-same Robert Taylor.

Indeed, so great was the exodus of our celluloid students one Saturday, that no one was left to play Rugby football, and the opposing side arrived at Honor Oak Park to find the place deserted.

Now, students, come, come, come. This will never do. We know that you get paid for your film work and you know that we cannot pay you to play Rugby football, because the Rugby Union would not let us, and besides, what would the other hospitals think? But we do appeal to you not all to go to Denham on Saturdays, and to see at least that enough players are left behind to fill the teams. What is a little filthy lucre beside a whole afternoon in the mud of South London?

Let us hope that we have said enough, for we faced the Rugby results in the Sunday papers last year with fear enough, and have no wish, when Cup-ties come along, to read the head-lines:—"Guy's scratch; forwards engaged by Bertram Mills."

Prize Distribution and Opening Address

By Sir Edward Poulton, M.A., D.Sc., F.R.S., President of the British Association, on Friday, 8th October, 1937. The Right Hon. Lord Nuffield (Hon. Treasurer) in the Chair.

THE CHAIRMAN: Ladies and Gentlemen, Sir Edward Poulton needs no words from me to introduce him to you. I will ask him first to distribute the prizes, and afterwards to make his address.

Sir EDWARD POULTON, M.A., D.Sc., F.R.S., President of the British Association, then distributed the prizes as follows:—

MEDICAL SCHOOL

Open Junior Science Scholarship (£100)—P. W. Hopper.

Confined Junior Science Scholarship (£100)—S. Muntarbhorn.

War Memorial Scholarship in Arts (£200)—J. Wilks.

Open Scholarship in Arts (£100)—F. Fourman.

Epsom Scholarship (entitling the holder to free Medical Education)—R. A. Craig.

Edgcumbe Prize for Junior Science—G. H. T. Lloyd.

Junior Proficiency Prizes—R. C. Hallam (£20), A. F. Rushforth (£15), H. A. Rowley (£10).

The Hilton Prize for Dissections (£5)—J. A. Gillett, prize; P. A. J. Smith, certificate.

The Michael Harris Prize for Anatomy (£10)—H. A. Rowley, prize; K. O. Rawlings and A. F. Rushforth, certificates.

Prize in Human Embryology—H. A. Rowley and J. N. Hunt, prize divided.

The Wooldridge Memorial Prize in Physiology (£10)—R. C. Hallam, prize; P. Harvey and A. F. Rushforth, certificates.

The Golding-Bird Medal and Scholarship in Bacteriology (£29)—A. W. Taylor, medal and scholarship; E. R. Davies and A. J. Walker, certificates.

The Golding-Bird Medal and Scholarship in Obstetrics and Gynæcology (£29)—R. D. Blachford, medal and scholarship; A. M. Edwards, certificate.

The Beaney Prize for Pathology—R. D. Blachford, prize (£30); A. W. Taylor, prize (£15).

The Leonard Lubbock Prize for Clinical Pathology (£10)—A. J. Walker, prize; H. Jackson, certificate.

The Treasurer's Medal and Prize for Clinical Medicine—E. B. French.

Charles Oldham Prize in Ophthalmology (£30)—L. F. W. Salmon.

Charles Oldham Prize in the Neurological Aspects of Ophthalmology (£30)—W. E. Young.

University Entrance (British Universities) Scholarships—R. G. Thomas, scholarship (entitling the holder to free Medical Education for three years); N. A. Neville, exhibition (£60).

DENTAL SCHOOL

War Memorial Scholarship in Science (£160)—H. A. Buck.

Open Scholarship in Arts (£160)—E. O. Hohn.

Second Year's Prize in Dental Subjects (£10)—J. G. Hancock, prize; K. R. Titford, certificate.

Prize in General Medicine (including Medicine, Surgery, General Pathology and Bacteriology) (£10)—P. Ellis.

Newland-Pedley Medal and Prize for Operative Dentistry—P. Borghys, medal and prize; W. H. West, certificate.

Final Year's Prize in Dental Subjects (£10)—J. B. Hardie.

Sir EDWARD POULTON then gave the following address on—

EVOLUTION

Mr. Chairman, Ladies and Gentlemen.—It is difficult to talk of evolution with any success in half an hour, but I will do my best.

There are one or two main points, which I hope to illustrate by and by on the screen, but first I want to make one or two introductory remarks.

Evolution is the conception that animals and plants are developed from pre-existing animals and plants, and it is fairly old. Erasmus Darwin, in the century before the last, was one of the first, and Lamarck and Herbert Spencer and others later brought forward the view that organic evolution was a fact. When they attempted to explain how that fact came about, there was rather a difficulty. One point was the use and disuse of parts, which was supposed to be hereditary, to be cumulative, and to produce an effect in the course of generations. Another was the alteration of environment. More subtle things were the idea that memory was hereditary, and instinct was considered to be a sort of hereditary memory. These are merely headlines of causes which were supposed to cause evolution, according to Erasmus Darwin, Lamarck and others. The idea of natural

selection, which is different, came later, and it is interesting that it is a hundred years ago this year since Darwin first wrote in his notebook on the species question. In July, 1837, he wrote in his notebook on the subject, and he had been struck with the idea in the previous March. He was thinking over all that he had seen, and what impressed him most was that in the fossils seen in the rocks in South America there were the same groups as seen elsewhere, but in process of time they had become modified. Another point was the result of a visit to the Galapagos Islands, off the West Coast of South America, and though they were hundreds of miles from the coast of South America they were nearer to South America than to any other important country, and the animals were of the American genera, but not of the American species, suggesting that they came from America but had been altered. And different islands had different species; those which had passed from one island to another seemed to have become modified. He suggested that as the chief reason which made him think that evolution was a fact.

First of all, was it so? Were animals evolved? If they were, we should have to explain how it happened. He only got his idea on that in 1838, and in October he read Malthus on Population. He noted what Malthus said about checks to population, how animals which came into existence were more numerous than those which survived, and that there were checks. Does that mean that those which were swept away were less suited to existence than those which survived? He then went on working at this, and talking it over with his friends, and he had correspondence with Thomas Henry Huxley and Lyell and others, and was always accumulating evidence in favour of evolution and of natural selection. Then there was an interval of twenty years during which he did not publish anything on it. Later there arrived a letter from his friend Wallace, from the East Indies, who had chosen Darwin as the man who could tell him what to do with an idea formed as he was lying in bed with intermittent fever. He had begun to think about natural selection. There was a great difference in the rate at which these two men worked. Wallace says that in a week he had written out a full account of natural selection as he conceived it, and posted that account to Darwin and asked what he thought of it. He (Darwin) felt he ought to have it published and withhold his own, and that it should be known as the Wallacian theory, not as the Darwinian. He consulted his friends, and Sir Joseph Hooker suggested that the two papers should be read together before the Linnean Society. This took place on July 1st, 1858. And that is how natural selection was placed before the world. Fifty years after that we had a Jubilee meeting, *i.e.*, on July 1st, 1908, and Wallace and Hooker were present—Darwin and Lyell were dead. Wallace paid a moving tribute to the memory of Darwin and acknowledged him as the true author of the theory. It is one of the most inspiring things I have ever heard at a scientific meeting.

Now I want to show you some slides and give you some reason for thinking that this principle of natural selection is the true one, and that the ingenious explanations offered by Lamarck do not hold. The first difficulty was brought forward by Weismann in the early 1880's, when he challenged the statement that these characters formed in that way were hereditary, a transmission of acquired characters. There was a great debate on it at the British Association meeting in Manchester in 1887, and people began to believe that Weismann was correct and that the use and disuse of organs was not transmitted to descendants.

At the end of the century came the great Mendelian discovery, which had really been made fifty years before but had not been brought before the public. It was rediscovered at the end of the century by three independent naturalists, and has since then become a very important and interesting object of research. At first, when it was brought forward the popular view was that it was the end of Darwinism, that Mendelism was the only thing. Many of us disagreed with that, and many people have come round to see that it works in with and is a buttress to Darwin's natural selection. It was a very large business, and I shall not have time to go into it, but this is the established view.

When we had the discussion in Manchester in 1887 about the transmission of acquired characters, I ventured to bring forward a point of view which seemed to me opposed to the Lamarckian one. One idea of Lamarck was that of the inheritance of the effects of experience, that animals gained an advantage and learned to do things better, and that this capacity was passed on to the next generation, so that in time the animals became more adapted to their surroundings. What struck me at once—and I brought this forward at the time—was that when you are dealing with a small animal which is the prey of a larger animal, experience does not come in. The object of adaptation is not to get experience, but to avoid experience. In seeking experience the small animal is eaten. Experience is the most dangerous thing in the world. The whole object in life is to avoid experience. I shall show you a series of slides as examples of this.

Naturalists have found that lizards and birds do attack insects of the kind I show you, and probably in that way selection has been exercised.

I show the underside of a moth which hangs from the branch of a tree, with wings drooping but not quite closed. The underside of the abdomen is a most conspicuous bright orange, and enemies which know it is not good to eat recognise that orange colour, and, unless they are very hungry, they do not eat it.

In the next slide is a butterfly. When it is in the position shown the orange stripe is visible, but it is not on the body; if it were it would not be seen. That is conclusive evidence that it is an appeal to an enemy which is hunting by sight. If the colouring appeared in the same place as in the moth it would not be seen at all, because the abdomen is actually covered by the wings. Some have maintained that birds will never attack butterflies at all. But you must remember that a keen collector—not a naturalist—one who wishes to add specimens to his collection, does not study what happens to birds or other enemies. It has been shown that birds do attack butterflies.

Now I shall show you one or two examples of attitudes assumed by insects. First I show a moth resting on a tree trunk. A naturalist of Oxford observed that 95 per cent. of these moths rest so that their stripes are in the same direction as those of the tree trunks. Yet you cannot imagine that this moth could learn anything by experience. If it were not in that position it would be more liable to be eaten than if it were in this position. But it had no opportunity of learning whether this was a dangerous position. Not only do the stripes go in the same direction, but the hard line in front of the wings is up against the edge of a crack, and in that position is much less conspicuous. It means that the moth walks to the right place and opens its wings against the crack, and that, of course, is a very great advantage from the point of view of safety. It could not pass on the fruits of its experience, since the experience was its last and it could have no descendants after the experience of being eaten.

Now we come to consider their larvæ. The first slide in the series is the larva of such a moth. It is sitting on a twig, and it maintains its position by means of an extremely fine thread of silk. If you cut that fine thread with scissors, the caterpillar will fall back at once. But eventually you find that it has spun a new thread. I have another one of a caterpillar, at a younger stage. It curls itself up so as to appear to represent the excreta of a bird, forming on the leaf a similar pattern. Another example relates to a beautiful caterpillar of the Emerald moth; it is much shorter and does not require a thread.

One of the most interesting kinds is a caterpillar which stands upright on its support; that is the position of least strain for it. There are others which live on leaves and grasses. Here is one which rolls its body round. It is pale in colour, and looks like an empty snail shell; it is commonly seen on grassy downs. So these creatures must maintain themselves in some position motionless by day, and if the attitude is wrong there is no means of mending it. So, as I have said, the object is to avoid experience, not to learn by experience.

I want to show that these creatures are protected, and that they do carry out concealment. Experiments have been made in the last two or three years showing the way in which they are protected by assuming positions of this sort. Notice that on this hawthorn this particular caterpillar looks like a piece of twig. An observer got a branch like this and fixed it over a nest where birds were feeding their young. The parent bird used this branch as a convenient perch; it did not know that many of the twigs were really caterpillars. Yet if the caterpillar were taken off the twig and placed on a white or even a light surface, the bird would recognise it at once and would eat it. The next slide shows the caterpillar placed on a white surface, and the wren is shown about to eat it.

I began with moths, and proceeded to their caterpillars, and now we will go on to their cocoons. This first one is from West Africa. Another slide shows a cocoon covered by little spherical objects which look like the cocoons of parasites of the caterpillar. These are really bubbles of froth surrounded by silk threads and are made by the caterpillar itself. The enemies are deceived by what they take to be an empty parasitised cocoon. Here again the "experience" of the caterpillar is that of being eaten, which could not be transmitted to offspring. Enemies get sharper and sharper in perception, and so there is a mutual improvement leading to a very perfect adaptation.

I am sorry that, owing to limitation of time, I have been able to say so little on such a tremendous subject.

* * * * *

The DEAN (Mr. T. J. EVANS) proposed a vote of thanks to Sir Edward Poulton. He said:—

My Lord, Ladies and Gentlemen.—I am sure I am expressing the wish of everybody present when I propose a very hearty vote of thanks to Sir Edward Poulton for coming among us this afternoon to open the new session and to close the old one for decoration, as it were. If I may be allowed to obtrude a moment's personal reference I would like to express my own satisfaction at having an old teacher and a senior member of my

PRIZE DISTRIBUTION AND OPENING ADDRESS

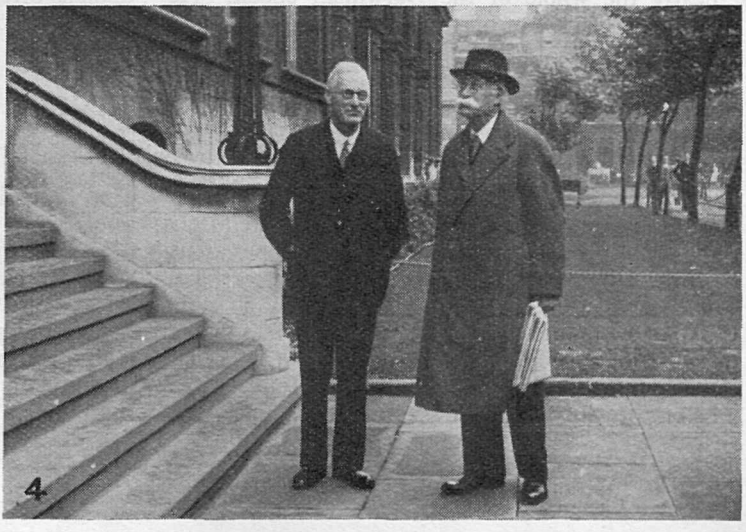
Some Celebrities arriving.

1. Professor Sir Edward Poulton.

2. Lord Nuffield and Professor Johnston.

3. Miss MacManus.

4. Professor Sir Edward Poulton and Dr. Poulton.



old College at my side when, for the first time, I stand in this rather exposed situation. The honour which Sir Edward has paid us this afternoon is a measure and a reflection of the honours and distinctions that the learned societies and universities of the world have been showering on him practically all his life. Time does not permit me to enumerate the long list of honours that Sir Edward has received from various universities and scientific societies. They are to be found tabulated in the pages of the reference books. I will mention, however, two in particular which I am sure Sir Edward must be more proud of than any of his other distinctions, namely, the Medal of the Linnean Society, and the Darwin Medal of the Royal Society. It is worthy of mention, also, that the Royal Entomological Society long ago made Sir Edward a Life President. It would seem, indeed, to have been inevitable that Sir Edward Poulton should become president of every society he ever joined, from the Oxford Union Society in his youth to the British Association in this year of grace. Some people seem to be gifted at birth with the qualities and faculties that, in later life, make them presidents and medallists of learned societies if they turn in one direction, or great captains of industry and millionaires if they turn in another. Guy's is specially interested this afternoon in having among us the only President of the British Association who ever had a son in the presidential chair of a section at the same meeting. We in Guy's are proud to be connected with this unique event in having a son as a colleague and a father as our guest. Nor indeed, ladies and gentlemen, does this exhaust our association with the name and family of Poulton, for we have also the very valuable Poulton Memorial Fellowship, due to the munificence of the family.

And now I come to the splendid lecture itself. Sir Edward Poulton has been an eye-witness of nearly the whole of the Darwinian epoch. He has also been one of the greatest workers, and indeed one of the makers of the epoch. One of my colleagues the other day made the remark, "Why, Poulton *is* evolution." And when the Darwinian theory had to meet the full blast of criticism at the end of the 19th century and the early years of the 20th, Sir Edward was its most potent champion, and he has, happily, lived to see natural selection, at last, stabilised upon what would seem to be even a sound mathematical foundation, and it is to this high fruit of a long life spent in this field that we have been listening this afternoon, and, ladies and gentlemen, I ask you to signify your appreciation of the privilege in the usual way.

The motion was carried amid cheers.

* * * * *

Mr. W. M. MOLLISON, M.Ch.—Ladies and Gentlemen, it is my great pleasure to propose a very cordial vote of thanks to our Chairman of this afternoon. Everyone knows the great interest which Lord Nuffield has taken in medical education in the last few years, and he has shown us that that interest still exists by coming among us to preside this afternoon. Ever since he became associated with the School he has taken the keenest interest, in various directions, in helping the School, and he has recently been of the greatest help in advising as to the best way of raising a considerable loan which is required for the cost of new buildings, which are going up, though at present almost invisibly. I ask you to give a hearty vote of thanks to Lord Nuffield.

The thanks were accorded by a hearty cheer.

* * * * *

Lord NUFFIELD (in reply).—Ladies and Gentlemen, I would like to say it has given me the greatest pleasure to come here this afternoon. As you know, anything I can do for Guy's is only a pleasure. And with that I ask you to release me from saying anything this afternoon. I am called upon so often to say things that I am afraid people will very soon get tired of hearing me talk.

Plastic Surgery

A Clinical Lecture by Nils L. Eckhoff, Esq., M.S.

GENTLEMEN,—It may be thought by some of you that Plastic Surgery is entirely a product of the Great War. Operations for the restoration of the nose by utilising forehead and cheek flaps have been performed in India since time immemorial amongst those tribes where loss of the nose in warfare was common. Similar restorations have been performed in Italy, a flap being obtained from the arm, since the 16th century, and a book was published by Tagliacossi as early as 1597. While recognising the brilliance of these early efforts, it is obvious that the greatest advances have been made during and since the Great War.

It is my purpose to-day to describe to you the main principles underlying plastic surgery, and to illustrate its application in a number of special conditions.

INCISION

A surgeon has to consider the cosmetic appearance of any incision he makes, and this is especially important on the exposed parts. In the first place I should like to draw your attention to the natural lines of cleavage in the skin, which depend upon skin elasticity and mobility. The whole body has thus been charted out, but I am unable to lay my hands upon an illustration to show to you. If you care to look at your own hand, either the dorsum or the front of the wrist, you will see a number of fine lines running for the most part transversely. Similar lines can be detected on other parts of the body. An incision made in one of these lines will

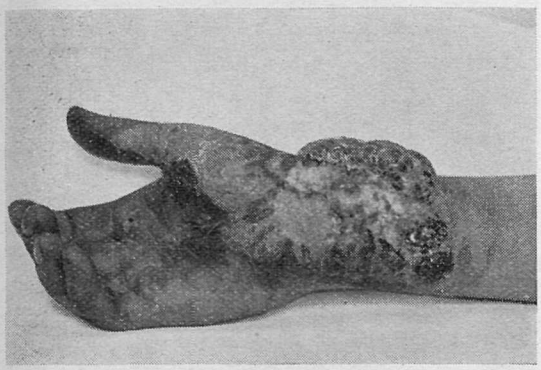


Fig. 1.
Electric burn granulations.

heal with the minimum of scarring, while one made at right angles to it will produce a scar which widens progressively, even though primary healing was good. I often think the usual longitudinal scar for the removal of a ganglion is more unsightly than the ganglion itself.

It has been suggested that an incision made obliquely through the skin will heal with less scar

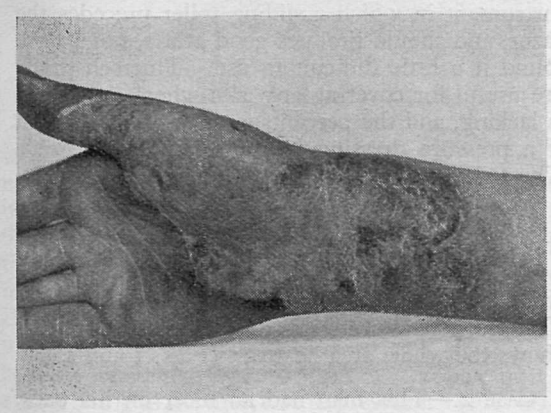


Fig. 2.
Nine days after grafting.

formation than one made at right angles to the skin, but I am not convinced that this is true, and suturing is more difficult. Special attention must be drawn to the fact that in a certain proportion of individuals there is a pernicious tendency towards keloid formation, the scars becoming red, thick and raised up from the surface. The tendency may be detected in some other scar on the skin surface, while in a suspicious case a trial incision may be justified. Radium applied to a further incision shortly after healing will help to check this tendency.

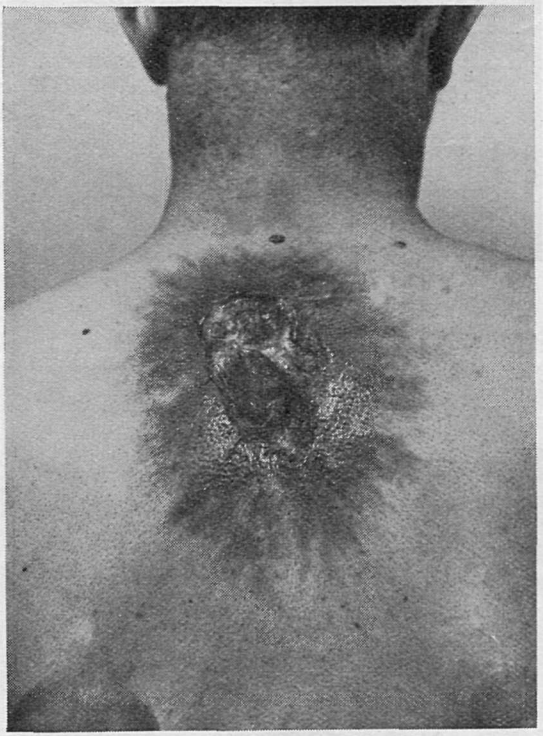


Fig. 3.
Ulcer unhealed for six years.

SUTURE

The next matter for consideration is the method of suture. Fine horsehair sutures on fine needles produce the minimum of scarring, if removed about the fifth day, and this is always possible in parts with a good blood supply, provided no tension exists. Sutures are placed close together, and may either be interrupted or continuous and everting. Michel clips are useful in larger wounds, as for thyroidectomy, for they can be inserted much more rapidly, and produce no scarring if some are removed on the second day, and the remainder on the fourth.

GRAFTS

In most cases where a plastic operation becomes necessary some form of graft will be required. The simplest is the *Thiersch* or razor graft. The razor is placed flat on the skin, its back edge slightly lubricated. The skin in front of the razor is kept flat and stretched with a piece of wood also slightly lubricated, which advances immediately in front of the razor, while the latter is pushed to and fro in broad sweeps with a sawing movement. The graft consists of the epidermis and a part of the dermis, and with practice grafts to or three inches broad and six to eight inches long can be cut. Humby, of this hospital, has invented an instrument in which a sliding roller precedes the razor, and should produce good grafts, but I have found it a little difficult to use. Thiersch grafts are useful for covering any area where skin alone is lacking, and the percentage of " takes " is high if a pressure dressing is applied over the graft. The following cases illustrate their use.

Fig. 4.
After excision and grafting.

Fig. 5.
Ulcer in old X-ray scar.

Fig. 6.
Original area healed ; pressure necrosis above.

CASE 1.—This man had an electrical burn of the hand, in which epithelialisation was slow, whilst excessive granulations sprouted through the wound. These were pared off and a graft applied. The second picture taken nine days after grafting shows the whole area healed. (Figs. 1 and 2.)

CASE 2.—This man had an ulcer on his back, for which he had had extensive X-ray treatment. The ulcer was extremely painful and had been

unhealed for six years. I excised it widely and applied Thiersch grafts. The next picture shows it completely healed. (Figs. 3 and 4.)

CASE 3.—This man teaches a lesson. He had a tuberculous ulcer on his leg which had also been treated excessively with X-rays. It remained healed for many years, and then broke down. (Fig. 5.) I did not at once realise that it was really an X-ray scar, and excised it boldly and applied grafts. He was in the ward for months, and had grafts applied on several occasions, and

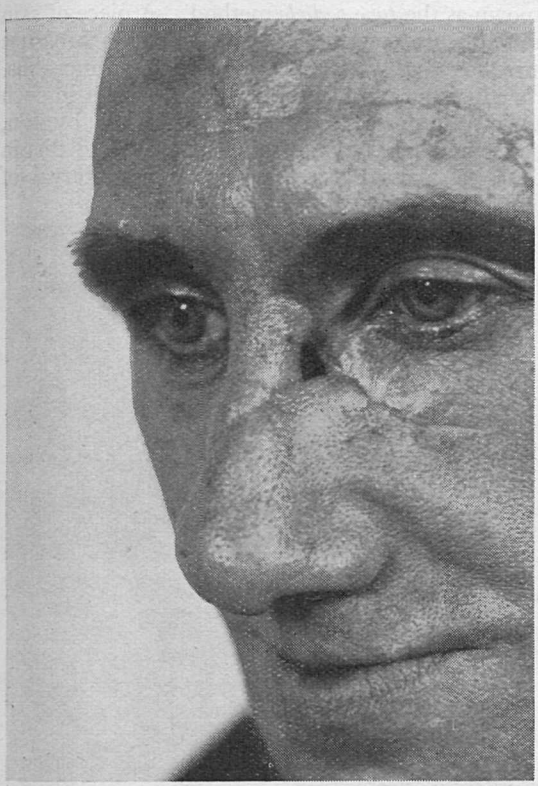


Fig. 7.
Hole into nose.

when these failed every sort of stimulating ointment. It was early borne in upon us that the underlying tissues were completely avascular and fibrosed, as the result of the previous X-ray treatment, and also that unless the leg were splinted movement of muscles was preventing proper rest. He was finally put in plaster, and on its removal weeks later we were overjoyed to find the ulcer healed, but chagrined to find a second ulcer almost as big as the first, due to pressure. (Fig. 6.) I shall approach all cases of X-ray burns with circumspection in the future.

Reverdin's or pinch grafts are obtained by picking up the skin with forceps and cutting with knife or scissors. The grafts are implanted on the raw area, and may be used to promote healing in an ulcer. The method is tedious, and is of little advantage when success can be obtained so readily with Thiersch grafts.

The *Wolfe* graft, or whole thickness graft, is useful on the face, for it has a better cosmetic appearance than a razor graft, but it is not so certain to "take." It is usually cut to the exact size necessary to cover the defect, a model being obtained with a piece of tinfoil or cellophane. With a knife the skin is dissected off in its whole thickness, and carefully applied and sutured to the recipient area. Pressure is again used over the dressing, and the graft tended carefully on the second day, to evacuate any collection of fluid under it. When successful it is a most gratifying form of graft to use.

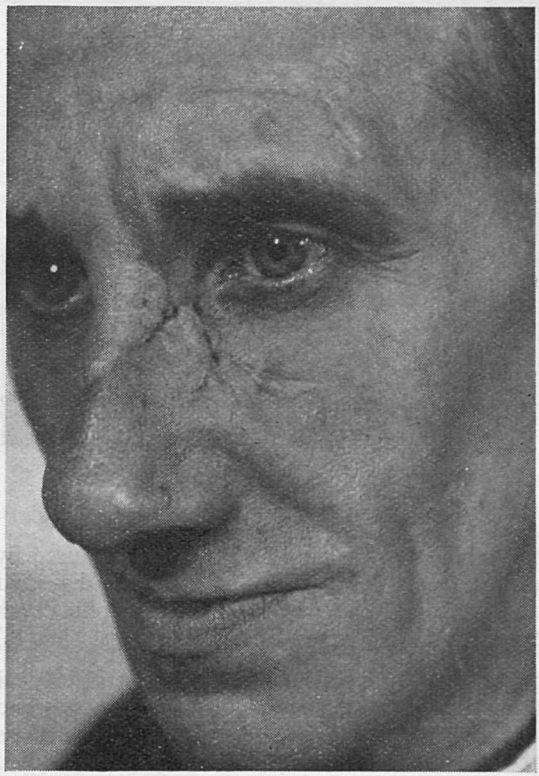


Fig. 8.
Treated by sliding flaps.

While it is possible to take some fat with a Wolfe graft, it is wiser when a thicker graft is desired to make use of some form of flap, the simplest of

which is a *sliding* flap. Many hundreds of varieties of sliding flaps have been designed and used, for the details of which I must refer you to books on the subject. Each case must be studied individually, and flaps planned which, when elevated, will slide into place, allowing the whole to be sutured again.

CASE 4.—This is a simple example. This man

Fig. 9.
Rodent ulcer.

had a hole into his nose on the dorsum caused by an accident. A small flap of skin was dissected up to form a lining, and a flap slid from his cheek to cover this. The result is good. (Figs. 7 and 8.)

CASE 5.—This woman had a rodent ulcer near the lateral canthus, involving both the upper and lower eyelids. With the help of Mr. Law portions of both lids were removed, and the defect remedied by sliding a flap from the forehead. Unfortunately the ulcer recurred in the substance of the new flap, and she has recently been in the ward again. It was found that the eye was fixed, with rodent implantations on the cornea, and Mr. Morgan removed the eye (in the absence of Mr. Law), while I removed extensive portions of the remainder of the lids, and diathermatised the bone from which the ulcer appeared to spring. It will later be necessary to perform a more extensive plastic operation to repair the defect. These cases are notoriously difficult to deal with. (Figs. 9 and 10.)

Where there is not sufficient tissue available near the defect some form of *rotation* flap, based on one of the main arteries, may be used. A good example is the Indian method of repairing a nose by means of a forehead flap, hinged in the region of the glabella.

Gillies has developed this further by what is known as the *tube pedicle* method. A piece of skin and subcutaneous tissue, at least half as broad as it is long, is dissected up through lateral incisions. Its edges are sutured together underneath in such a way as to produce a tube lined externally by skin, the remaining edges being sutured deep to this in the best manner possible. After an interval of

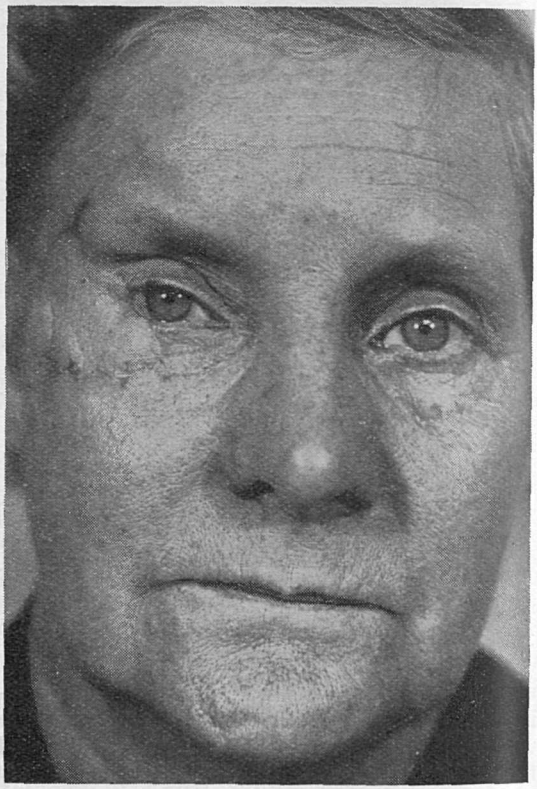


Fig. 10.
Treated by excision with sliding flap.

ten days to three weeks the tube is detached at one end and swung to the desired position and sutured there. After a further interval the second end is detached, the tube opened out and applied to its

new home. The purpose of the tube is to encourage blood vessels to travel longitudinally in it, thus making for safety in transference.

It is possible by the use of the tube pedicle to move a piece progressively over quite considerable distances, or by using the arm as an intermediary to transfer a tube from the abdomen to the face. It is important to note that if such a tube be used in the repair of a defect opening into one of the mucous-lined cavities, it is essential that the flap is lined on its deep aspect, or it will shrink and wither and become useless for its purpose. The flap may be lined by a separate Thiersch graft, or by being folded upon itself. In some few instances it is possible to find sufficient mucous membrane to line the flap.

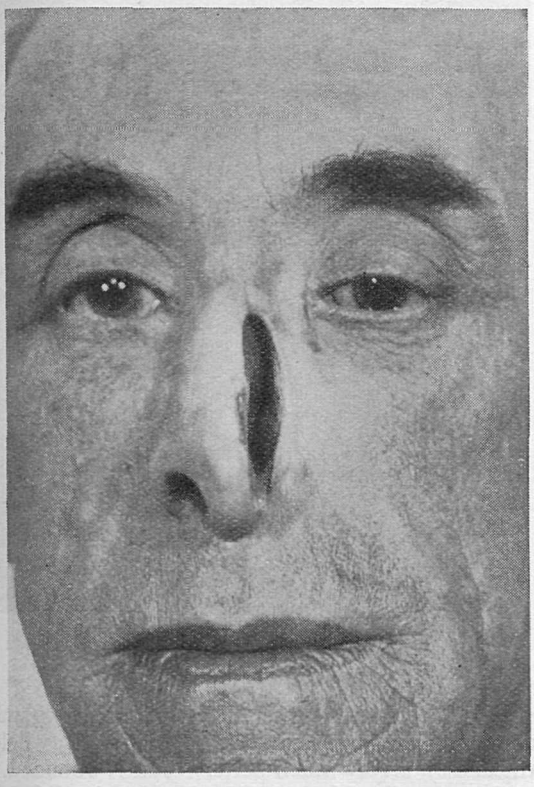


Fig. 11.
Nose after destruction of rodent with radium diathermy.

CASE 6.—This man has lost half of his nose from the ravages of a rodent ulcer which did not respond to radium treatment, and had to be destroyed with diathermy. (Fig. 11.) Some weeks ago I prepared a flap from his scalp, using in this case a slight modification by which the flap was "delayed." This means that it was outlined by cutting through the skin down to the periosteum, and later replaced in position. At the same time I lined the deep aspect of the end of the flap with a Thiersch graft, thus producing a suitable portion for making a new covering to the nose. I also grafted the area on the skull that will be rendered deficient by the amount required to build up the nose.

At the second operation I transferred the flap to the nose, tubing the remainder. (Fig. 12.)

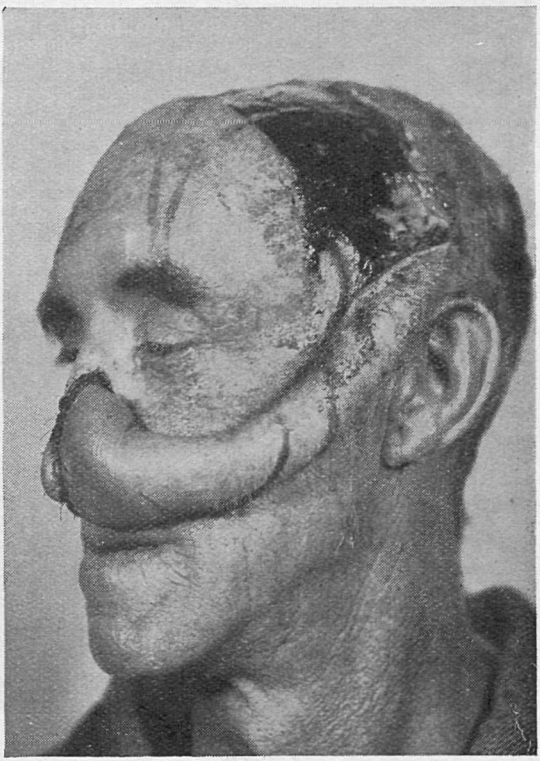


Fig. 12.
Lined flap transferred to nose.

Later I intend to cut off sufficient to make the nose (this part being already lined), and return the tube to the scalp.

EPITHELIAL INLAY

Esser described this manœuvre in 1917, and as it is particularly valuable in many instances, deserves special mention. It is used in correcting ectropion and in restoring the sulcus between the lip and the jaw. Let us consider a case of hare lip, where as the result of previous operations the lip is retracted and stuck on to the upper jaw. By careful dissection the lip is freed from the jaw sufficiently to correct or over-correct the deformity. A large raw area is thus produced. A piece of Stent is moulded to fit this space. A Thiersch graft is cut large enough to cover both anterior and

posterior aspects of the Stent mould, and is applied to it, raw surface outermost. The whole is now placed in the cavity and held in position by a previously prepared dental splint. At the end of ten days the Stent is removed and the cavity is found to be completely epithelialised. The cavity must be kept stretched for some time to prevent contraction, when the final result will be found to be most gratifying. The same procedure is used in cases of ectropion.

Fig. 13.
Ectropion from rodent ulcer.

CASE 7.—This woman had an ectropion of the lower eyelid following the scarring associated with the treatment of a rodent ulcer below the lid. I dissected up the lid into its normal position, and applied a Thiersch graft supported with Stent to the raw area. The lid was temporarily stitched back into the abnormal position. When the Stent was removed the cavity was found to be satisfactorily lined, and the final result is rather better than this picture, taken about fourteen days after the operation. (Figs. 13 and 14.)

DUPUYTREN'S CONTRACTURE

In this condition the usual operation of incision, excision of contracted palmar fascia, and resuture is often followed by bad scarring and further contraction. If when the hand is straightened after a careful removal of all the contracted tissue, any defect is made good with a skin graft (whole thickness), a very much better result is obtained.

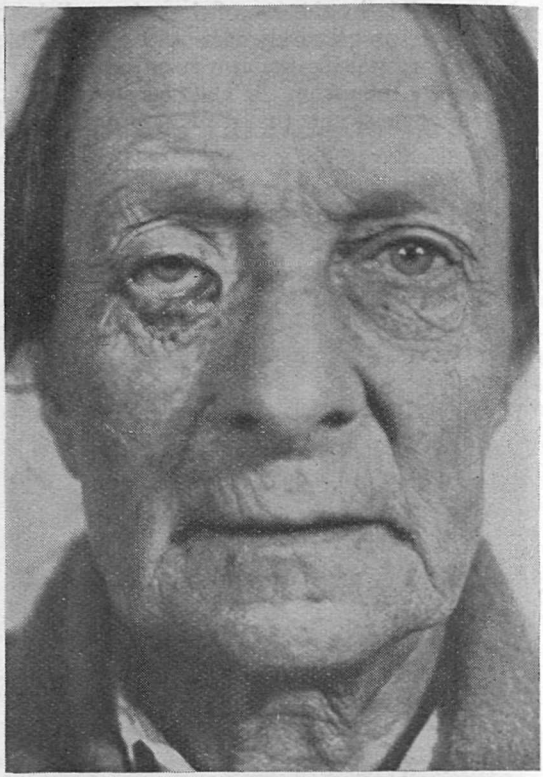


Fig. 14.
Shortly after grafting.

CASE 8.—In this case I unfortunately did not get any pictures before the operation. After dis-

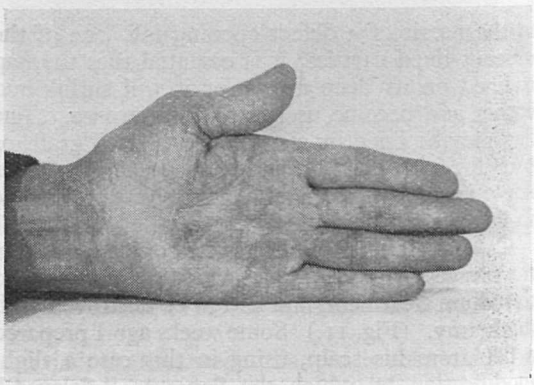


Fig. 15.
Dupuytren's contracture after treatment.

secting away the contracted palmar fascia through the incision you see, and grafting the triangular

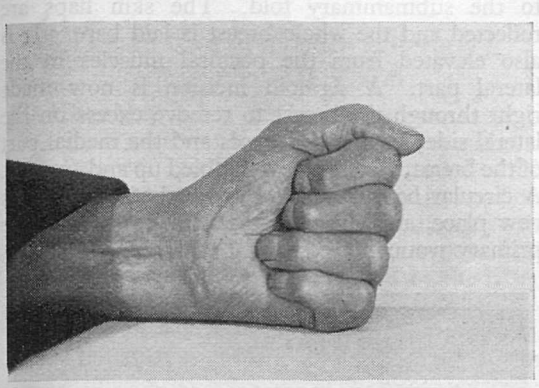


Fig. 16.
Dupuytren's contracture after treatment.

defect at the upper end, I placed plaster of paris directly on to the skin, as was suggested to me by Humby at the time. On removal of the plaster the hand was healed and completely extended, and for some time after I thought that flexion was going to be limited instead, but I am pleased to be able to show you further pictures taken later, which reveal full flexion and full extension. (Figs. 15 and 16.)

Fig. 17.
Nose before treatment.

RHINOPLASTY

This term covers all sorts and varieties of operation upon the nose, and I have not the time to discuss the ethics of taking away from or adding to a proboscis whose shape was determined by nature and heredity. But I may say at once that operations are definitely justifiable when and where a nose has been deformed by injury or disease. Apart from the necessity of creating a skin covering as described above, it is sometimes necessary to provide support for a nose that is collapsed through loss of bone or cartilage.

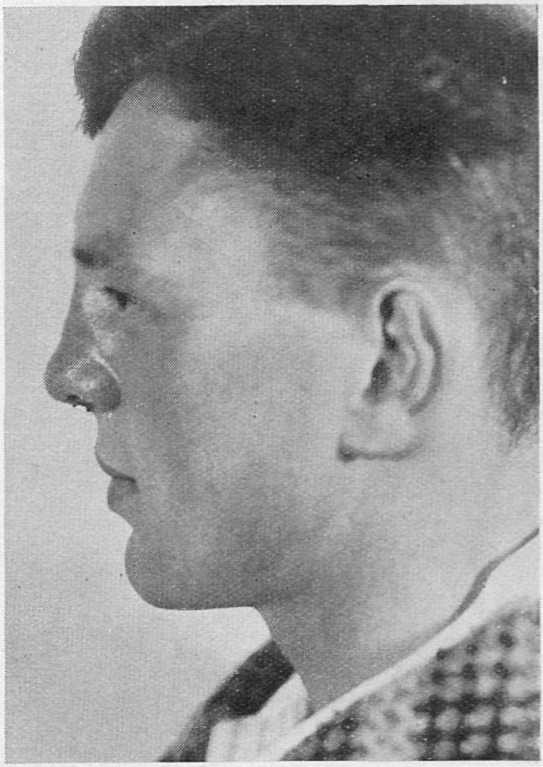


Fig. 18.
Nose ten days later.

CASE 9.—This lad had a minor degree of boxer's nose, in which, owing to loss of cartilage from an infected hæmatoma of the septum, a hollowing occurs in the middle part of the nose. This patient was particularly sensitive about his appearance, and I offered to help him. Mr. Cann and I did this operation together. A piece of cartilage was taken from the costal margin through a transrectal incision, shaped in the form of a V at the correct angle, one limb being placed along

the bridge and one along the columella, into a bed prepared to receive it. The result is very satisfactory. (Figs. 17 and 18.)

MAMMAPLASTY

This is another field which gives great scope for the cosmeticians, but I will reserve my remarks to those cases of enlargement of the breasts so gross that it becomes a burden to the patient. Such cases are not very uncommon, and in both Stockholm and Vienna appear to be more common than they are in this country. Many operations have been devised to deal with the abnormality, and I need not discuss their minor differences here.

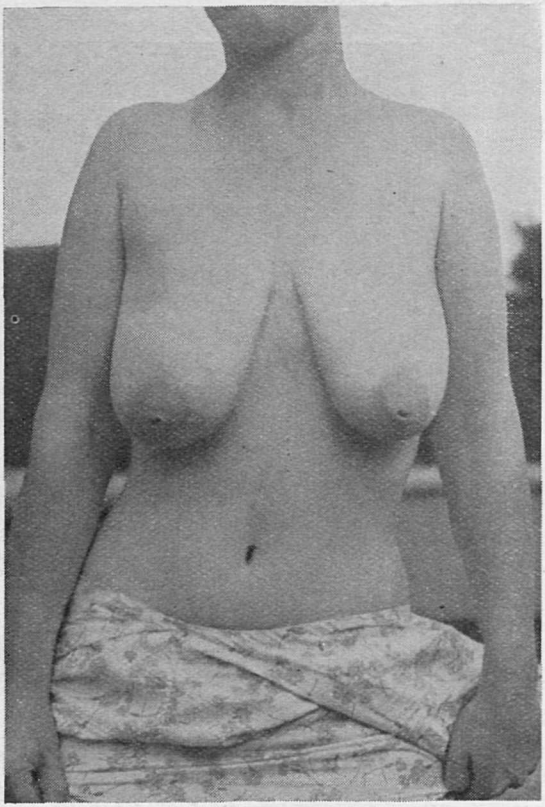


Fig. 19.
Breast hypertrophy with mastitis.

CASE 10.—In this patient I practised the operation that has been evolved by Biesenberger. Mr. Atkins, who was very interested, kindly came down to St. John's to help me with it. The young woman had large breasts which hung well below the costal margin, and had, in addition, a patch of mastitis in each in the lateral part. The areola was enlarged as you see in the picture. (Fig. 19.)

The operation consists in circumcision of the areola, making the new areola more correct in size. A second circular incision is made about an inch wider, from which a vertical incision stretches to the submammary fold. The skin flaps are reflected and the whole breast is laid bare. It is also elevated from the pectoral muscles in the lateral part. A sigmoid incision is now made right through the breast to remove excess on the lateral side, leaving the areola and the medial part of the breast, which is now doubled up and sutured. A circular hole is cut to receive the nipple in its new place, and this is sutured in position. The primary wounds are sutured with drainage.

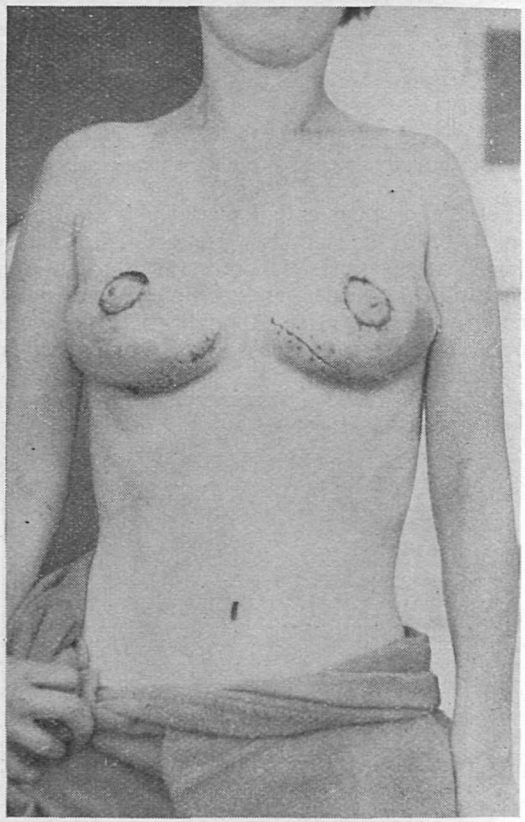


Fig. 20.
Ten days after mammilliplasty.

The result, seen in the second picture, is only ten days later, so that stitch marks are still rather obvious, and the breasts look lumpy. (Fig. 20.)

I have in this lecture only been able to give you a very superficial idea about plastic surgery. Those of you who are interested will discover that it takes a tremendous amount of diligent study in the learning, and great patience and care in the execution. Not the least important factor is the fortitude of the patient, who often has to suffer repeated operations, but a result achieved gives great satisfaction to all concerned.

Correspondence

"The Future of Speech Therapy"

To the Editor of the GAZETTE

SIR,—May I beg for some space to reply to your correspondent Dr. R. E. Smith, of Rugby. His first difficulty is caused by his misquotation of my words: "failure to approximate the vocal cords firmly" constitutes "insufficient cord resistance." I was reported to have stated that the former is caused by the latter. He goes on to ask for evidence that the stammerer fails to approximate correctly his vocal cords. Surely the evidence of his ears should be sufficient and he must have observed the typical stammerer making the "shapes" of his words but failing to emit the vocal tone required for normal speech. His next difficulty is the "tonelessness" of the cords. The word is his, not mine, but my dictionary tells me that it means "lacking sound"; it also has another meaning, "lacking colour," but this is irrelevant in this connection. The vocal cords produce vocal sound in singing, humming, speaking, laughing, groaning, moaning, coughing, etc.; at all other times "tonelessness of the cords" persists! Abnormal "tonelessness" can be noted when the stammerer "shapes" but does not "sound" his words.

Dr. Smith wants to know why (1) a stammerer can read when left by himself, (2) in chorus, (3) why he can sing fluently, (4) what is the importance of the fear factor. The existence of the fear factor answers his first two questions. Any other difficulties, including his third question, are fully met in my book "Your Stammer and How to Correct it." His letter suggests that he knows of this book, but that he has not read it carefully.

Dr. Smith goes on to quote the statement, "the stammerer can and does speak perfectly." I find it difficult to believe that if he had ever had a comprehensive voice training or had even given himself time to study the voice rather than the stammering habit, he would have quoted these words. Any and every vocal expert will agree with me that nearly all stammerers have faulty voice production, speak too fast, and have a jerky rhythm. These characteristics do not constitute perfect speech any more than the lawn tennis rabbit who returns one shot out of thirty should be described as a perfect player. To speak an occasional sentence without breaking down completely does not constitute perfect speech. But evidence and experience for a great number of years proves that if the stammerer will study speech as it should be, instead of trying to avoid a breakdown, and if he will persist and so establish habits of what may be accurately described as *perfect speech*, he will be unable to stammer. I speak with the experience of a person who has stammered, who has had a thorough experience and training in voice production for song and speech, and more than twenty years of hospital and private experience.

Dr. Smith is anxious about the medical supervision of my work! He will be glad to know that every patient visiting me at hospital has been sent to me by a doctor.

Lastly, he yearns for uniformity of treatment. I have before me a letter which reached me on October 13th; it contains the following sentence: "I am a stammerer in spite of daily psychological treatment for five years." This letter is typical of scores which reach me, and surely indicates that a treatment which is successful in one case will not necessarily succeed in another.

In my humble opinion the speech therapist should have a full training in voice production, in speech (not elocution), and should be himself a first-rate speaker, otherwise he does not know what the stammerer should aim at, nor can he illustrate it. If Dr. Smith will read both my latest books carefully he will find many, if not all, of his difficulties cleared up, and he will realise that I have explained what the stammerer should do, what he does at his best, and what happens in a breakdown; the methods of leading him from his bad habits to speech at its best must depend on the personality, ability, experience and practical psychology of the teacher, and will vary with every individual case. For this reason I am against all class work. I admit that speech therapists differ in their opinions, but even doctors sometimes hold divergent opinions!

Yours, etc.,

H. ST. JOHN RUMSEY.

153, Clarence Gate Gardens,
N.W.1.

Preventive Medicine and Public Health

To the Editor of the GAZETTE

SIR,—As an old editor, I should like to congratulate you on your Special Number in general, but to draw attention to certain omissions. Would a freshman be right in concluding that no instruction is given at Guy's in Preventive Medicine and Public Health, or that

no help is given him towards facing the peculiar problems of general practice? Is the Guy's training a purely specialist training with a view merely to the passing of examinations in rare or acute disease? Is any training given to enable the future practitioner to take his part in the National Fitness Campaign?

Yours, etc.,

FRANCIS FREMANTLE.

Bedwell Park,
Hatfield, Herts.

Ventilation

To the Editor of the GAZETTE

SIR,—Though not a freshman, my critical faculties, "blind through habit," were re-awakened the other day when I was showing a new boy over this great Hospital of ours. How apologetic I felt when I introduced him to the College at lunch-time and noticed more acutely than ever before the almost nauseating odours of the cooking! I am sure the chef would not welcome a surprise inspection of his domains if odours are indicative of prevailing conditions.

Needless to say, I could find no vacant seat either in the Spit or the Restaurant. We returned later, but since that day I do not think that new boy has patronised the Spit, and, except for its convenience, I can hardly blame him.

From a more constructive point of view may I put in a plea for adequate ventilation of the Spit and of the kitchen, and I don't mean draughty open windows.

Yours, etc.,

ANON.

Nurses and Union

To the Editor of the GAZETTE

SIR,—On behalf of many Guy's nurses in training, I would like to say that we feel that your remarks in the recent "Passim," concerning the nursing profession, might have given an entirely wrong impression to your readers, especially old Guy's nurses and men, who are not here to judge for themselves. We are most anxious to correct this.

I should like to bring to your notice a few points.

The Guy's Nurses' Representative Council is composed of Matron and two representatives from nurses in each year of training. This Council meets regularly. No names are mentioned when points are brought up by a representative on behalf of individual nurses. All questions are put to the vote. The ratio of Staff to Nurses in Training being 1 : 8. These figures speak for themselves.

In this Hospital there is a unit of the Student Nurses' Association of the College of Nursing, and this is able to approach the Council of the College directly with suggestions and resolutions. The fact that this machinery of organisation is not often used is no answer to the criticism that the College does nothing for Student Nurses; it is rather a reflection on the apathy of the nurses themselves.

Have medical students direct access to the Council of the British Medical Association?

The policy of the Nurses' Charter passed by the Trades Union Congress at Norwich in September corresponds very nearly with the policy of the College of Nursing, as may be seen in the excellent exposition of this policy in the *Nursing Times* of September 25th.

The malcontents who think the College too slow should read this thoughtfully and then join and make the wheels go quicker. Personally, I do not think it has been so slow, after all. Henry VIII presented the Charter to the Medical Profession.

Guy's nurses do not want to hold themselves aloof from any attempt that is being made to improve the profession, but we wish to work through our existing machinery, both within and without the Hospital.

Why form new organisations here? There are many places where none exists.

Yours, etc.,

PHYLLIS G. M. LLOYD.

Guy's Hospital,
S.E.1.

Notice

THE HOCKEY CLUB DANCE

The Hockey Club Dance will be held on Friday, November 5th, from 8 p.m. to 1 a.m., at the Mecca Café, Ludgate Hill, E.C. Tickets, priced 8*s.* double, may be obtained from any member of the Committee, from the team secretaries, or from E. J. Martin in the Phantom Head Room in the Dental School.

Guy's Hospital Biennial Dinner

SATURDAY, OCTOBER 30TH, 1937

LIST OF GUY'S MEN WHO HAVE UP TO THE PRESENT DATE SIGNIFIED THEIR INTENTION TO ATTEND THE DINNER

1879—1899

1879 Hale-White, Sir Wm.
1880 Parke, C. J.
1886 Sandoe, J. N.
1887 Browne, Robley.
1890 Fawcett, John.
Robinson, W. E.
1891 Thomas, A.
1893 Alston, W. E.
Eyre, Prof. J.
Pendred, Vaughan.
1895 Constable, J. C.
Hovenden, G. S.
Hovenden, A. C.
Steward, F. J.
1896 Ormond, A. W.
Spon, H. J.
Spicer, A. H.
1897 Milton, W. J.
Way, Montague.
1898 Ainley-Walker, E. W.
1898 Barrow, Major-Gen. H. P. W.
Moore, P. W.
Swan, R. H. Jocelyn.
Turner, Philip.
1899 Berncastle, H. M.
Payne, J. Lewin.
Pearce, F. J.
Ruzzak, S. A.

1900—1909

1900 Brydone, J. M.
Goble, E. W.
Moss, B. W.
Parrott, H. McD.
1901 Atkins, Sir John.
Bent, S. C. H.
Lewin, G.
Tilbury, R.
Willan, G. T.
1903 Cooper, J. S.
Glanville, L. S. H.
Wallace, F. H.
1904 Alcock, F.
Bromley, J.
Hurst, Sir A.
1904 Meade-King, W. T. P.
Mollison, W. M.
Stevenson, C. M.
Ticehurst, G. A.
Way, Norman.
1905 Cameron, H. C.
Crofts, A. D.
Mottram, M.
Payne, O. V.
Sheaf, E. W.
1906 Alcock, A.
Berry, A. W.
Blundell-Bankart, A. S.
Bookless, J. S.
Goodhard, G. W.
1906 Layton, T. B.
Morgan, E.
Palmer, A. S. M.
Litchfield, P. C.
Stebbing, G. F.
Turner, T.
1907 Densham, A. T.
Leeming, A. N.
Ripman, C. H.
Watson, J. N.
1908 Crook, A. H.
Price, C. E.
Ryffell, J. H.
1909 Bull, F. B.
Darke, S. J.

1910—1919

1910 Barber, H. W.
Bromley, L.
Cox, A. N.
Elliott, E. L.
Gardiner, H.
Hind, G. R.
Mullally, G. T.
Munden, M. M.
Poulton, E. P.
Yerbury, E. O.
1911 McNair, A. J.
Marshall, G.
1912 Genge-Andrews, G. E.
Henry, A. M.
Hoby, H. J.
Jepson, A. C.
Ozanne, R. C.
1912 Reynell, W. R.
Slesinger, E. G.
Smyth, W. J. D.
Stewart, J. L.
Zamora, A. M.
1913 Mather, H.
Morgan, O. G.
Perceval, J. L.
Roberts, C. Lane.
Tanner, W. E.
1914 Boswell, P. R.
Gibb, C. de W.
Harkness, A. H.
Lambrinudi, C.
Scott, P. D.
Sharpe, H.
1915 Attwater, G. L.
1915 Sells, R.
1916 Braine, J. F. C.
Campbell, M.
Jones, J. G.
Kidman, G. E.
McEvedy, P. G.
Wacher, H. S.
1917 Conybeare, J. J.
1918 Grace, W. H.
Lansdown, R. B.
Ralph, R. S.
Spencer-Payne, A. L.
1919 Braithwaite, J. V. C.
Dowling, G. B.
Moffatt, C.
Ord, A. G.

1920—1929

1920 Doherty, W. D.
Kendall, J.
1921 Lloyd, E. T.
Shaw, M.
1922 Hale-White, R.
Harris, T. A. B.
Harris, H. A. H.
Hudson, J. A.
Human, J. U.
Scholefield, B. G.
Stoker, G. M.
Watson, L. K.
1923 Boland, E. R.
Eckhoff, N.
Fawkes, R. B.
Gibberd, G. F.
Howitt, F.
Suzman, S. S.
1924 Barford, L. J.
1924 Davison, S. C.
Harding, H. E.
Houghton, L. W.
Mill, W. A.
Robinson, R. E.
Sears, W. G.
1925 Cuningham, R. W.
Edney, C. H.
Helder, Basil.
Gough, A. S.
Grove, W. S.
Jago, M. E. M.
Landon, G. S.
Northfield, D. W. C.
Pratt, F. H.
Way, John.
Whimster, W. S.
1926 Brock, R. C.
Hill, T. R.
Jarman, R.
1926 Law, F. W.
Post, H. W. A.
Pye-Smith, E. J.
1927 Abrahams, S.
Hudson, W. F.
McConnell, W. S.
Rickett, J. R.
1928 Bibgy, W. M.
Blaikley, J. B.
Hannay, W. F.
Harley, H. N. W.
Jones, W. D. G.
Langmead, L. B.
Stamm, T. T.
Wood, G. N. :
1929 Lane, K. E.
Morris, I. B.
O'Donaghue, R.
Woolley, J. W.

1930—1934

1930 Krusin, F. S.
McComas, G.
Rink, E. H.
Simpson, Keith.
1931 Atkins, H. J. B.
Batchelor, J. S.
Constable, H.
Denny-Brown, D.
Erskine, D.
Lashmore, G. F.
Lintott, G. A. M.
1931 Rogerson, C. H.
Rushton, M. A.
Todd, T. F.
1932 Clarke, C. A.
Fagge, Hilton.
Gorer, P. A.
Gill, W. G.
Irish, D. H.
Murdoch, J. B. C.
Payne, R. V.
1933 Brocklebank, J. A.
1933 Cope, R.
Jones, A. E.
Ogle, W. L.
O'Shea, J. P.
Robin, I. G.
Treble, H. A.
Zorab, E. C.
1934 Alexander, P. C.
Davies, D. A.
King, D. P.

Reviews

The Pharmacopœia of Guy's Hospital. Compiled by the Dispensing Committee. Published by Messrs. Ash & Co., Ltd. *Price 3s. 6d.*

THE *Guy's Pharmacopœia* is now in its twelfth edition, having been first published in 1791. It is twenty-one years since the last edition appeared and, as might be expected, there have been considerable changes made. In previous editions the sections " Formulary " and " Materia Medica " were intermixed in one section. Now they have been separated, which considerably simplifies the task of looking up a preparation. The type used is larger and clearer, and the present book is published in one standard binding only. The 1916 edition could be obtained with alternate printed and unprinted pages, which enabled one to make corrections and additions opposite the corresponding formula. It is noted with regret that this practice has been discontinued.

As before, there is a small formulary concerned with drugs for children, and an excellent section on Dietary containing, among other things, very full details as to how to treat gastric ulcers in all stages. The sections dealing with clinical chemistry and bacteriology have been entirely rewritten, and the Poisons List, with appropriate treatment, brought up to date.

With regard to the actual material, it has not been found possible to check the accuracy of all the quantities. Certain errors are bound to occur in a work of this kind, but it is important that they should be corrected as they are discovered. The following is a list of the misprints which have been discovered to date, and is published with the authority of the hospital pharmacist :—

PHARMACOPŒIA

Mistura Bismuthi Astringens.

For	Water to	4.0 ml.	4 fl. dr.
Read	Water to	4.0 ml.	1 fl. dr.

Mistura Ipecacuanhæ Composita.

Read Mistura Ipecacuanhæ Infantum.

Pulvis Crete Gallica Composita.

Read Pulvis Cretæ Gallicæ Compositus.

Tablettæ Sodii Citras.
Read Tablettæ Sodii Citratis.

Mistura Scillæ Ammoniata.
For Decoction of Chondrus 30 ml. 1 fl. oz.
Read Decoction of Chondrus 8 ml. 2 fl. drm.
Water to ....30 ml. 1 fl. oz.

Glycerinum Phenolis.
For It contains 20 per cent. of Phenol.
Read It contains 16 per cent. w/w of Phenol.

The above misprints are relatively unimportant, but there is one extraordinary, and we might almost say scandalous, omission: Arsenic has not been mentioned in the Poisons List.

Guy's Hospital Chapel

(*Omitted by error from the list of Guy's institutions published in the last issue.*)

THE Chapel will be found under the clock in the Front Court. Inside it is square in shape with galleries round three sides, and has often been described as a "drawing-room chapel of the Georgian period."

The stained glass windows commemorate William Hunt, the founder of the Medical Block, and others are recalled by brasses in various parts of the Chapel, while the mosaics and the oak panels are a memorial to those who have died in the medical service of the Hospital since 1867.

Facing the altar at the back of the Chapel is a monument to our founder, Thomas Guy, who is seen in the Court dress of the period tending a suffering man, with a replica of the facade of the Hospital in the background.

Through the little vestry on the right-hand side of the altar there is a small Chapel, where the Sacrament is reserved for the Communion of the sick. This quiet place is always open for private prayer.

The most important improvement that has been carried out in recent years is the restoration of the Crypt immediately beneath the Chapel, which for years had been a very dark and neglected place, but, owing to the generosity of the Sheppard Trust, in 1932 it was possible to make the Crypt a more worthy place to contain the Founder's tomb, and those of other benefactors. Thus a very beautiful and extensive Crypt has been made, and it is interesting to note that the work of restoration has been carried out with bricks from some old houses in the City, which were of the same period and were being pulled down at the time.

Among other tombs in the Crypt are those of William Hunt, Sir Astley Cooper and Charles Joye, the first Treasurer of the Hospital. The Crypt may be visited at any time, and the key may be obtained at the Front Lodge.

The Chapel and its services are open to all members of the Hospital and Schools. There are daily prayers morning and evening for the nursing staff in accordance with the Founder's wish and Holy Communion is celebrated at 7 a.m. and 8.45 a.m. on Sundays, and on week-days at 7 a.m. There is a morning service and address on Sundays at 11 a.m. A complete list of services will be found in the Chapel, and the Chaplain is always pleased to supply further information.

Sport

Rugby

Guy's v. United Services (Portsmouth)

(*Played at Portsmouth on Saturday, October 2nd*)

AFTER one of the most exciting games seen for some time, the Services managed to preserve their unbeaten record this season two minutes from the end, when they were awarded a penalty which enabled them to win by 3 penalty goals (9 points) to a placed goal and a penalty goal (8 points).

The Services were at full strength, but Guy's made three changes in the side which represented them at Coventry. After several months' absence Stanyon-Jaques occupied the position at scrum half. Kynaston, a former captain of Bedford School, made his first appearance in the senior side at right centre, and Darke returned to the pack.

The Hospital played well to a man, and after their fine display, especially in the second half, they doubtlessly consider themselves unfortunate to be robbed of victory when they had the game in their pockets.

There was a decided improvement in the team-work, and the whole side played well to a man. Nicholson has worked hard to effect an improve-

ment in the pack, and after this game he must have felt gratified with his efforts.

Although Stanyon-Jaques and Crawford took a long time to find an understanding, the backs combined well and were always threatening danger. Kynaston made a promising debut and fitted in successfully with the three-quarter line, and Plowman at full-back was reliable and kicked well.

On a hard ground, the first half was fought out at a fast pace, and the exchanges were fairly even. Both packs were magnificent, but once again Nicholson's hooking was too much for Pilot Officer Fox.

The Hospital saw plenty of the ball, and time after time they had the opposition guessing, but several delightful bouts of passing were nullified by the brilliancy of Lieut. Stevens at full-back, whose kicking and tackling were of the highest order.

Against the run of play the home side took the lead when Guy's were penalised for foot-up in their 25 and Lieut. Crawford kicked an easy goal. A little later the Services were awarded a penalty for offside, and again Crawford kicked a goal from an easy position.

After the interval, Guy's went all out to reduce the deficit, but Stevens proved the stumbling-block until a quarter of an hour from the end, when their efforts were rewarded. The Services had been kept on the defensive for some minutes, when Darke intercepted a pass in the Services' 25, passed to Dick, who ran in for a fine try, which he also converted.

Encouraged by this success, the Hospital continued to press, and very shortly Plowman gave Guy's the lead when he kicked a penalty goal.

The home side retaliated and worked their way to the Hospital's 25. Some hard scrummaging followed, but Guy's held out and, just when the Services appeared set for their first defeat of the season, Guy's were penalised in front of the posts, and Crawford kicked his third goal, to give the Services the victory in the last minute of the game.

Team.—R. D. Plowman; D. M. Douglas, R. C. S. Dick, R. U. F. Kynaston, A. B. Baxter; J. P. Crawford, K. A. Stanyon-Jaques; C. S. Darke, E. S. Nicholson (captain), H. H. Crabb, A. Forbes, J. R. D. Williams, G. Morris, R. O. Yerbury, C. F. Ziervogel.

Guy's v. London Irish

(*Played at Honor Oak Park on Saturday, Oct. 8th*)

A VERY good crowd turned up to welcome the London Irish and, after their fine display at Portsmouth, it was not surprising to see a strong contingent of Guy's men, all hoping to see the Hospital score another victory. Unfortunately, they found Guy's on one of their "off" days and, although they had several opportunities to turn the scales in their favour, the London Irish took full advantage of their escapes and ran out worthy winners by a dropped goal, 3 penalty goals and a try (16 points) to a placed goal and a try (8 points).

As Plowman was unable to play on account of illness, Guy's tried the experiment of converting R. D. Allen into a full-back, and, judging by his display in this game, Allen fully justified his selection. Throughout the match his positioning and kicking were excellent, and on two occasions he saved certain tries by clever anticipation and superb tackling.

The weather was perfect and the ground ideal when the Irish kicked off, and, in spite of the fact that they were a man short for the first ten minutes, the visitors set up such a determined attack that the Hospital had a hard struggle to keep out the storming rushes of the Irish forwards. However, following a loose scrum in the Hospital's 25, the ball came out quickly to Kilmartin, who, finding himself unmarked, took careful aim before dropping a goal, to give the visitors the lead after five minutes' play.

They quickly increased their lead when the forwards drove the Hospital back to their goal-line, and in the scrimmage that followed, Gallaher managed to force his way over in the corner for an unconverted try.

Guy's tried hard to get their machinery working, but the backs were uncertain and Kilmartin, profiting by a stray pass, intercepted and ran through the Hospital defence with De Mestre alongside. When faced by Allen it only needed a pass to De Mestre to be sure of a try, but Kilmartin made the fatal mistake of trying to score himself, and Allen brought off a splendid tackle which enabled Guy's to clear.

On another occasion Allen accepted a long punt ahead, side-stepped Tarrant who followed up closely, and started a three-quarter movement which ended in Douglas crossing the line, but he was recalled owing to a forward pass, and the Irish were able to start another movement which ended in Guy's being penalised for offside, and Tarrant kicked an easy goal.

After the interval Guy's got into their stride immediately, and Dick made a grand opening for Kynaston and Morris was up to take the final pass, which enabled him to score near the posts, and Dick added the goal points.

Within five minutes Guy's scored again when Kynaston broke through, passed to Dick, who flashed in behind the posts, but his kick at goal was charged down.

Guy's kept up the pressure, and soon afterwards they were awarded a penalty in front of the posts, but once again Dick missed an opportunity to give Guy's the lead.

This appeared to be the turning point of the game, as the Irish, profiting by their escapes, carried our several forward rushes which harassed the Hospital defence and eventually the visitors were awarded a penalty, and Tarrant made no mistake with the kick.

After Crawford had made a fine individual effort to get through, the Irish intercepted and Plunket appeared certain to score, when Allen brought him down with a glorious tackle only two yards from the line.

Guy's had several opportunities to pull the game out of the fire, but they frittered away their chances by uncertain passing and faulty handling, and near the end their fate was sealed when the Irish were awarded another penalty and Tarrant converted.

Team.—R. D. Allen; A. B. Baxter, R. U. F. Kynaston, R. C. S. Dick, D. M. Douglas; J. P. Crawford, J. W. Lewis; H. H. Crabb, E. S. Nicholson (captain), C. S. Darke, A. Forbes, J. R. D. Williams, R. O. Yerbury, C. F. Ziervogel, G. Morris.

Guy's v. Plymouth Albion

(*At Honor Oak Park on Saturday, Oct. 16th.*)

AFTER being eleven points in arrears, the Hospital staged a grand recovery in the second half, and won a most exciting game by 2 placed goals and a try (13 points) to a placed goal and 2 tries (11 points).

The visit of Plymouth proved a tremendous attraction, and it was just like old times to see so many spectators, and an enthusiastic crowd at that.

Guy's made one important change by bringing back M. R. Kark, who took his place in the second row of the pack with A. Forbes, and he proved his worth for his place kicking alone. The visitors were not quite at full strength, notable absentees being Brigstocke, a front row forward, and Warne, a stand-off half, who had represented Devon County earlier in the season. However, Plymouth have many excellent reserves, and B. James and T. Jeans, who deputised, did so well that it is doubtful whether the regular men could have improved on their display.

Although the ground was hard, there was plenty of grass, and Guy's kicked off in ideal weather with the sun in their faces.

Guy's had to defend immediately, as the visiting forwards swarmed down on the Hospital line and only superlative tackling kept them at bay. Following a scrum on the Hospital's 25 line, Guy's heeled, and Lewis sent Crawford and Dick away on the left, but in trying a short punt over the heads of the opposing three-quarters, Guy's had a set-back, when Hurdon collected and slipped through to score a try in the corner, which was not converted.

A little later another movement between the Hospital backs came to an untimely end when Hurdon intercepted in midfield, flashed bang through the centre and swerved past Allen to score a try behind the posts, which Jeans converted.

Following this reverse, Guy's, playing fine open football, made desperate efforts to reduce the arrears, and on one occasion a great cut through by Dick and Kynaston was stopped only a yard from the line, when Rowe at full-back brought Dick down with a superb tackle, and Jeans was able to clear.

Nicholson tried hard to get Guy's in an attacking position, and a series of brilliant passing movements between the backs deserved a better fate, but, unfortunately, nothing would go right and either a knock-on or forward pass spoilt openings which might have ended successfully.

A combined effort by Crawford and Kynaston gave Dick his opportunity to crash through the centre at great speed; he almost eluded the close attention paid to him and, when faced by the full-back, cross-kicked to find Darke, Crabbe and Morris up with only a yard or two to go, but the ball was knocked on in the excitement and a wonderful opportunity went astray.

Plymouth luckily cleared their lines from a set scrum, and, following a long kick, the visiting backs followed up and eventually Hurdon again out-paced the Hospital defence and scored another unconverted try.

Things began to look black for Guy's, but they responded to the calls of their supporters and, following a snappy bout of passing, Dick swerved past Mercer and Miller and eventually gave Morris the final pass which enabled him to score near the posts, but Kark just missed the kick at goal.

In the second half Guy's were a totally different side; the forwards, who had been rather overshadowed by the Plymouth pack, now took up the initiative and were complete masters both in the loose and set scrums.

This was a pleasant change from last season, when the Hospital generally fell away after the interval, but this year they appear to have developed the habit of saving their best until after half-time.

The second half had scarcely begun when a grand movement between Dick and Baxter enabled the latter to give a return pass to Dick, who flashed by the full-back to score behind the posts and Kark added the goal points.

With only three points separating the two sides excitement was worked up to fever pitch, and with Guy's still attacking and playing a fine open game, the Hospital went all out to take the lead.

This they did after the forwards had dribbled the ball near the Plymouth line, and Rowe kicked it into touch near the corner flag. From the throw-in a scrum followed, and the Hospital forwards carried it over the line, for Kynaston (who was awarded the try) and Morris to drop on the ball almost simultaneously.

Amidst tense silence, Kark took tremendous pains in placing the ball, and from a most difficult position near the touch-line he kicked a gem of a goal, to give Guy's the lead.

The excitement reminded one of a Hospital Cup Final, and it is a long time since the crowd cheered so much as they did.

Guy's did not relax their efforts, and continued to play good football, but Plymouth were by no means finished, and towards the end they gave the Hospital one anxious moment when Hurdon got away on the right wing once again and, catching Guy's napping, he outstripped all opposition and, with Harris alongside, looked certain to score, but Allen tackled him magnificently and saved a desperate situation, which enabled Douglas time to get back and clear.

This was a close shave, and another soon followed when Plymouth nearly saved the game in the next minute when their forwards pressed heavily well inside the Hospital's 25, only to be sent back as the result of a penalty for offside, and the final whistle sounded as Guy's attacked once again.

The Hospital fully deserved their success, which, after the bad luck which dogged them in the last two matches, should give them the encouragement they require. They are a fitter side than last year, and their team work shows a definite improvement. The forwards backed up each other admirably, and if they can only maintain that fire and pep shown in the second half, then Guy's can safely leave the backs to do the rest. Nicholson led the team magnificently, and both he and Dick are to be congratulated on their efforts to restore the Rugby at Guy's to its former standard.

Team.—R. D. Allen; A. B. Baxter, R. U. F. Kynaston, R. C. S. Dick, D. M. Douglas; J. P. Crawford, J. W. Lewis; H. H. Crabb, E. J. Nicholson (captain), C. S. Darke, M. R. Kark, A. Forbes, C. F. Ziervogel, R. O. Yerbury, G. Morris.

RESULTS

September 25th

1st XV. 6 points. Coventry (34).

"A" XV. 11 points. United Services (Portsmouth) "A" (23).

2nd "A" XV. 36 points. Old Roffensians (0).

"B" XV. 6 points. Centymca "A" (0).

2nd "B" XV. 3 points. Old Mitchamians (18).

October 2nd

1st XV. 8 points. United Services (Portsmouth) (9).

"A" XV. 13 points. Old Cranleighans "A" (0).

2nd "A" XV. Saracens Ex. "A." (Cancelled.)

"B" XV. 17 points. Old Emmanuel "B" (0).

2nd "B" XV. 3 points. H.M.S. *Worcester* (3).

3rd "B" XV. 19 points. Harrow Ex. "B" (3).

Wanderers XV. No points. Chingford Ex. "A" (6).

FORTHCOMING FIXTURES

October 23rd

1st XV *v.* Harlequins. Twickenham.

"A" XV *v.* Worthing. Worthing.

2nd "A" XV *v.* St. Bartholomew's Hospital Ex. "A." Honor Oak Park.

"B" XV *v.* Clare College "Unemployed." Honor Oak Park.

2nd "B" XV *v.* Saracens' Ex. "B." Motspur Park.

Wanderers XV *v.* Whitbread's. New Malden.

Hockey

GUY'S v. POLICE COLLEGE

THIS match usually results in the closest of games, and this occasion was no exception. Played in glorious weather on a hard pitch which made the ball rise a lot, the hockey was not as accurate as it might have been, but a fast and interesting game was seen. The Police College attacked from the initial bully-off, but were un-

able to get the ball past Needham. The Hospital forwards then got going, mainly down the left wing, and the Police goal had several escapes.

After fifteen minutes, Haines, the Irish International centre, scored for the College, after some excellent passing with his inside left. This reverse spurred the Guy's forwards to greater effort, and we attacked constantly with the result that two goals were scored by Martin from centre by Franklin. The forwards were combining well at this stage, and up to the interval Guy's had more of the play, and might well have been put further ahead.

The opening play in the second half was even and very fast, both goalkeepers having several shots to save. Guy's went further ahead after ten minutes, when Martin scored.

Following a period of even play, our defence tired, and up to the end of the game the College attacked persistently. Haines reduced the deficit from a short corner, and was unlucky when another corner shot hit the upright. Several breakaways by our forwards came to nothing, and the final whistle came with the Police College again attacking.

The Guy's defence was excellent throughout, although tiring a little towards the end. The two backs were safe, and Buck was the best of the halves. The forwards combined well on occasion, and as the results of previous matches show, can score goals, but there is still lacking that skilful play of the inside forwards which knits a forward line together.

The final score was 3—2 in our favour.

Team.—E. J. A. Needham; J. S. Astbury, T. C. Thorne; E. Smith, A. C. Greene, H. A. Buck; F. R. Buckler, G. E. Roberts, E. J. Martin, C. H. Phillips, J. B. Franklin (captain).

Previous results were as follows :—
Sept. 29th.—High Wycombe (H.). Won, 5—1.
Oct. 2nd.—South Saxons (A.). Lost, 2—6.
Oct. 9th.—University College (A.). Won, 9—0.
Oct. 13th.—University College Hospital (H.). Won, 7—1.
Oct. 16th.—Police College (A.). Won, 3—2.

Golf

GUY'S v. NORTHWOOD GOLF CLUB

THE Hospital Golf Team visited Northwood Golf Club for the first time on the 15th September, and was entertained to a very enjoyable evening. We did very well to beat, by 4 points to 3, the home side, which was led by C. J. Anderson, a Middlesex amateur champion.

Results were as follows :—

Guy's		*Northwood*	
B. C. M. Reed	0	C. J. Anderson (6/5)	1
S. M. Whitteridge (1 up)	1	E. M. Palmer	0
P. Wilson (1 up)	1	B. E. Jenssen	0
T. N. Praat	0	F. E. Hooper (6/4)	1
P. D. Spooner	0	G. Ashwell (4/2)	1
J. C. Ritchie (6/5)	1	H. F. Hanchard	0
K. S. Maclean (4/2)	1	J. D. Mackenzie	0
Total	4	Total	3

GUY'S v. KING'S COLLEGE

A HOSPITAL "A" team was entertained to a match at Addington Palace by King's College on October 13th, and was successful by the overwhelming margin of $6\frac{1}{2}$—$\frac{1}{2}$ points.

Results were as follows :—

Guy's		*King's College*	
J. C. Ritchie (7/6)	1	E. A. Robb	0
T. N. Praat (halved)	$\frac{1}{2}$	A. R. Llewellyn	$\frac{1}{2}$
K. S. Maclean (5/4)	1	W. Grieg	0
P. D. Spooner (6/5)	1	D. Rowland	0
A. E. Parrott (5/4)	1	W. G. Desai	0
E. S. Foote (6/5)	1	A. C. Merrington	0
R. A. Wheatley (4/2)	1	K. Thompson	0
Total	$6\frac{1}{2}$	Total	$\frac{1}{2}$

A return Match will be played at Sidcup Golf Course on November 3rd.

Guy's Hospital Gazette
(ESTABLISHED 1872)

A Journal of Hospital News, Medicine, Surgery and Dentistry

Published on alternate Saturdays. Price 9d.
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Marriage, Birth and Death announcements inserted free.
The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Fencing

THE Fencing Club started the season with an away match against Westminster School, which resulted in a win for the home side by 16 wins to 11 wins.

The Hospital were unfortunate in not being at full strength owing to indisposition of some of the regular members of the first team.

R. F. Parfitt did best for the Hospital by winning six out of nine fights, losing one fight with each weapon. R. Hudson Evans, although badly out of touch with the foil, was undefeated with the sabre. H. E. Moody and R. H. F. Pearce were both a little out of practice, but will improve with more match experience.

The results were :—

Foil

Westminster.—M. A. Pears, 3 wins, 0 defeats; P. Fitz Hugh, 2 wins, 1 defeat; D. F. Pears, 2 wins, 1 defeat. Total, 7 wins.

Guy's.—R. F. Parfitt, 2 wins, 0 defeats; R. Hudson Evans and H. E. Moody, 3 defeats. Total, 2 wins.

Epée

Westminster.—M. A. Pears, 1 win, 2 defeats; D. F. Pears, 3 wins, 0 defeats; P. Fitz Hugh, 1 win, 2 defeats. Total, 5 wins.

Guy's.—R. F. Parfitt, 2 wins, 1 defeat; R. Hudson Evans, 2 wins, 1 defeat; H. E. Moody, 0 wins, 3 defeats. Total, 4 wins.

Sabre

Westminster.—M. A. Pears, 2 wins, 1 defeat; D. F. Pears, 1 win, 2 defeats; R. E. Nye, 1 win, 2 defeats. Total, 4 wins.

Guy's.—R. Hudson Evans, 3 wins, 0 defeats; R. H. F. Pearce, 0 wins, 3 defeats; R. F. Parfitt, 2 wins, 1 defeat. Total, 5 wins.

Final results were: Westminster, 16 wins; Guy's Hospital, 11 wins.

Hospital Information, etc.

Notice

We have to inform our readers that, owing to an error, the Dental Manufacturing Company's old address was published in "The Dental Curriculum" article in our last issue. Will intending purchasers please note that their address is—Brock House, Great Portland Street, London, W.1.

Pass List

D.C.M.

Gavin Thurston.

UNIVERSITY OF CAMBRIDGE.

FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.

October, 1937.

PART I.

Organic Chemistry.

D. H. B. Bevan-Jones.

SOCIETY OF APOTHECARIES OF LONDON.

PRE-MEDICAL AND PRIMARY EXAMINATIONS.

October 4th, 6th and 7th, 1937.

Materia Medica and Pharmacy.

H. F. Sparling.

Papers by Guy's Men

C. S. Hallpike. On a case of deaf-mutism of traumatic origin. *Jour. Laryngol. and Otol.*, 1937, lii, 661.

C. P. Symonds. Mental disorder following head injury. *Clin. Jour.*, 1937, lxvi, 397.

L. R. Broster. Cranial fractures. *Medical Press and Circ.*, 1937, cxcv, 282.

H. M. Worth. Radiographic differential diagnosis. *Brit. Dent. Jour.*, 1937, lxiii, 389.

George W. Bray. Allergic diseases. *Practitioner*, 1937, cxxxix, 363.

T. Izod Bennett. Diabetes mellitus. *Ibid.*, 377.

S. H. Raza and W. R. Spurrell. Some characteristics of the action of urine upon amphibian melanophores. *Jour. Phys.*, 1937, xc, 429.

A. H. G. Buxton and Another. Subcutaneous emphysema in diphtheria. *Lancet*, 1937, ii, 740.

N. Mutch. Magnesium trisilicate. *Brit. Med. Jour.*, 1937, ii, 735.

Alan H. Todd. On the avoidance of mistakes in the treatment of fractures of the ankle. *Med. Press and Circ.*, 1937, cxcv, 324.

Martin A. Rushton. The dental conditions in cleidocranial dysostosis. *Dental Rec.*, 1937, lvii, 554.

Changes of Address

B. C. Morton Palmer, Thrushel, Copthorne, Sussex.

Birth

FERNIHOUGH.—On September 29th, 1937, to Kathleen Carrie (née Oram), wife of Wing-Commander F. Fernihough, M.C., of "Ashley," 21c, Cottenham Park Road, Wimbledon, S.W.20—a daughter.

Death

PALMER.—On September 28th, 1937, in an Exeter nursing home, Gertrude Eleanor, wife of F. W. Morton Palmer, M.D., late of Teignmouth.

EDS. { A.G.W.H. H.B.O.C.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *6th November* 1937 — *Number* 1286

PASSIM

THE news of the new Psychiatric Clinic has at last crystallized out in a definite announcement which appeared in the Press last Saturday, and we can now add to the rather meagre information contained in that announcement some details of general interest to our readers.

Psychiatry in England has always occupied the position of the unwanted child, and it did not surprise us to learn that in every department of the subject we are in England twenty years behind the Continent and the U.S.A. In a country like ours where medical attention is the handmaid of a variable charity—one which is influenced by every trade slump and change in the income tax—it is to be expected that applied psychology, with its complex workings and uncertain results being seldom concerned with matters of life and death, would tend to be left out in the cold and remain the friendless orphan.

Understandable, perhaps, but essentially a mistaken notion, for if the problem is considered from any particular point of view, mental illness can be said in every case to rival physical afflictions in its inimical effect on the human race.

The mental patient with a long drawn-out illness, even of the mildest psychoneurotic variety, may be the cause of more misery to himself and his family than will any of the acute physical disorders or bereavements which he and his family have to suffer. From an economic point of view, the loss to the country is staggering. The Government pays out each year some £7,000,000 for the care of the more obvious forms of mental illness, and to this must be added the loss of earning capacity of the 150,000 inmates of the various asylums, estimated conservatively at £15,000,000. We have been forced into taking care of the frankly insane, largely for our own protection, but little has been done here to grapple with mental disease in its early stages, and, in fact, so badly equipped are we in England for this work that even though one may wish it there are few suitable institutions where such prophylactic work may be done. If one has the problem of treating a psychoneurosis in a patient who should have skilled care, one is faced with the problem of sending him to an institution where he will be surrounded by others suffering from chronic mental illness, or of placing him in a nursing home in which no competent psychiatrist is in residence. Such, then, is the state of affairs existent at the moment in these isles, for in this branch of medicine Britain remains much inferior to other civilised countries. We do not know why this should be so, but we think it is largely due to our natural distrust as a nation of anything new or foreign to our minds. Modern trends in psychology have given rise to certain hypotheses which have conflicted with some of our more cherished ideas, and in consequence we have looked with distrust on the whole subject; also psychiatry has attracted to its ranks certain individuals who have brought disrepute on its name. While a certain natural distrust may have been excusable and a national habit of diffidence with regard to new ideas understandable, the fact remains that the problem is a very real one which has long clamoured for an early solution.

As a result of a most generous gift of £43,000, Guy's is in the happy position of being able—as ever—to lead the way. Our psychiatric department, the first of its kind established in England, is by far the most comprehensive existing at this time, and now we are to have a splendid clinic housing forty-two patients as a permanent part of the Hospital. It is to be built at once and will be between the new Pathology Block and the Borough High Street. It will contain divisions for major as well as for minor mental disorders, for psychotic as well as for psychoneurotic conditions. In addition to the sectional accommodation there will be an occupations room, a reading room, dining room,

lounge, gymnasium, games room, roof garden and solarium. There will be a full-time clinical staff of four doctors whose duties will be to combine treatment with research and who will work under the guidance of Dr. Gillespie.

It was hoped by the donors that the beds might be incorporated in the general hospital from the point of view of finance, thus enabling free treatment to be extended to the poor. This however, would have added an intolerable increase to the already heavy financial burdens of the Hospital, and to provide free accommodation for the clinic would cost in the neighbourhood of £12,000 per annum.

Since this would evidently be impossible, it has been decided to charge the patients on a sliding scale according to their means, the charges being fixed in such a way that at the end of any one year the receipts should just cover the expenditure. The charges, which will be inclusive of medical attention and extras, will range from 3½ to 11 guineas a week. It is hoped in due course to raise an endowment fund which would allow these figures to be reduced. The poor, although not direct gainers by the new clinic, will not suffer since the present beds in the general wards will continue to be reserved to them.

The functions of the clinic are threefold: to treat major and minor psychological disorders; to form a research unit in close working connection with a general hospital; and lastly, to enable students of general medicine to familiarise themselves with the essentials of psychiatric treatment.

With these objects everyone will be in sympathy, and also with the hope and expectation we have heard expressed that the clinic will form a real integral part of the Hospital and that each will derive benefit from its association with the other. It is obviously greatly to the advantage of the clinic to be able to utilise the medical organisation of the Hospital, and the converse is equally true, although we do not feel it will be so readily appreciated. We have noticed a general tendency, which we do not suppose is peculiar to Guy's, to divorce the treatment of organic and the "functional," and it has not escaped us that, as soon as a patient is labelled "functional," it is sometimes considered outside the province of those in charge of the case to treat him, or, indeed, to call in the aid of the psychiatrist. This dissociation of the treatment of the body and the mind is, we believe, a bad one, and we may perhaps be allowed to express the hope that the foundation of the new clinic will facilitate a closer co-operation of those concerned with each.

As far as the student is concerned, the new clinic should prove an excellent training ground in the study of the subject. The present arrangement by which he has to sacrifice another appointment in order to join the psychiatric firm is not a satisfactory one, and the fact that psychiatry is not strictly an examination subject has caused many students to forego the appointment to their loss. We presume that with forty-eight beds in the department it should be possible to provide the majority of students with three months' training, but unless some reorganisation is made in the times of out-patients and other attendances the difficulties mentioned above will remain.

All these points, however, will doubtless come up for consideration at some later date. The fact which causes us particular satisfaction is that there is to be a new clinic and that Guy's is to be the possessor of it. Who is responsible for giving the money we do not know, indeed, the Superintendent himself has disclaimed all knowledge of the identity of the "five friends," so we do not feel it is incumbent upon us to speculate as to who they may be.

Congratulations, however, we would offer, firstly to Dr. Gillespie for the magnificent clinic which he is about to acquire for his department, and secondly to Guy's in that it can continue its long tradition of being in the vanguard of progressive medicine.

▭

FOR some time past the starlings have been holding nightly meetings to arrange the exact formation for their flight to warmer climates.

This, though no doubt essential for the starlings, has been a constant source of irritation to those of us who have to walk under the trees, and has necessitated much extra labour in scouring the Park.

The authorities spent three evenings last week in producing a series of explosions whose object was to hasten their departure. We hope we are now rid of them, but wish them *bon voyage*.

▭

ALL those who are boxing fans will be able to indulge their fancy and incidentally help the Hospital by attending an amateur Boxing Tournament which is to be held at the Stadium Club, High Holborn, on Friday, 12th November, at 7.30 p.m.

We are given to understand that an excellent programme has been arranged, including a star bout between Mr. F. J. Simpson (A.B.A. Lightweight Champion, 1936) and Mr. H. A. Groves (S.W. Division Lightweight Champion, 1937). Tickets (2*s*. 6*d*. to 21*s*.) may be obtained from the Appeal Secretary, Guy's Hospital.

THE desire for self-expression is, we often read, a very basic one and, according to some modern child psychologists, is not one to be thwarted with impunity. We must suppose that it is this desire which is responsible for the institution of the "editorial" in modern journalism, for wherever one looks, be it in the staid pages of a technical journal or in those chatty and colourful weeklies devoted to the doings and divorces of the Hollywood stardust, there does one find the "editorial" occupying on the opening page an exalted position quite unsuited to the interest which it is likely to arouse. We do not claim any exemption in this respect, and can honestly say that precedent is our only reason for continuing to reserve to ourselves the premier position each fortnight in this journal.

Personally we are not great readers of editorial opinion, for we notice a certain sameness and predictability in the attitudes expressed in those columns which does not hold the attention. The editor of the *Daily Express*, for example, has a theme song entitled "Minding one's business," of which one will hear only infinite variations, whereas the *News-Chronicle* occupies itself exclusively with the minding of everybody's business, however remote from its own. Yes, a certain sameness reminiscent of the Guy's rugger results.

In this respect anyhow, honoured readers, we claim to differ from our older and indubitably better-paid colleagues who occupy panel-lit offices in Fleet Street—and this for two excellent reasons: firstly, because the subjects upon which our comment is required are few and so removed from the controversial that it requires extreme ingenuity to formulate a considered opinion at what is often a few hours' notice; and secondly, because the succession of *Gazette* editors who occupy the hard-backed and draughty editorial chair is an ever-changing one. Some of us succeed and some fail to arrest and hold your wandering attention, and a few have that special quality of being able to provoke you out of your natural lethargy into joining issue with us upon the most unlikely topics. Such a one was Mr. Hill, who last week was our editor and now is no longer, as he has left the Hospital to take up other work. The subject of a Trade Union for Nurses and the admission of women students to Guy's were among his major successes in the gentle art of provocation, and he can retire with the assurance that as far as we are concerned his witty and stimulating pen will be much missed.

We extend to him our thanks and our best wishes for his future, in which we are sure our readers join us.

We are pleased to be able to say that Mr. C. H. Edwards has consented to fill the vacancy as Assistant Editor, and we are sure no better choice could have been made.

WE have always had a liking for the Debating Society and have followed its history of recent years with a feeling of paternal solicitude. Let it be known, therefore, to one and all that it is taking a new lease of life. There has already been one successful debate this year and it is to be followed next Tuesday by the second of a series of six which, we hope, will prove as equally felicitous.

The motion will be: "This House deplores the tendency in modern England to curtail the liberty of the individual." It will be proposed by H. F. Osman, opposed by R. E. Rewell, and in the Chair will be Mr. J. Whillis. The place is the "Spit," the time 5.30 p.m., November 9th, and there will be free beer to moisten the parched throats of the speakers.

The Assessment of Symptoms Following Head Injury

From an Address to the North Staffs. Medical Society by C. P. Symonds, Esq., M.D.

MR. CHAIRMAN and GENTLEMEN,—My object this afternoon is to discuss with you the common symptoms of head injury, and assess their value. Incidentally, we may consider some of those symptoms which belong to dangerous and fortunately rare complications, such as meningeal hæmorrhage. The important symptoms of head injury are, of course, those which result from injury to the brain.

Of all the symptoms of cerebral injury, the most interesting are those of mental disorder, and of these the most dramatic is loss of consciousness. When, however, we speak of loss of consciousness, we really need to ask ourselves what it is that we mean. If a man lies flaccid with stertorous breathing, and is unresponsive to painful stimulation, there is no difficulty about our all agreeing that he is unconscious. But what of the man who, after an accident, gives his name and address when asked by a policeman, yet afterwards has no memory whatever of having done so, or of the period during which the accident occurred? If we had been present at the time, we might well have said he was conscious, but if we examined him later we should say that his behaviour *suggested* that he was conscious, but that he was really unconscious of what he was doing. We find from experience that a man may actually

exhibit quite complicated and orderly behaviour over a considerable period of time, and yet have no memory for this period. Careful observation during this phase, especially by one who knows the patient, will usually reveal that he is not quite himself. The state of affairs is quite comparable with that which may be observed in the same person when he is slightly under the influence of alcohol. He is not quite himself because the topmost levels of his cerebral structure —speaking physiologically—are out of action. Not only is he not himself, but he is a slightly lower self. As Hughlings Jackson expressed it, the result of a putting out of action of the highest mental level is twofold. There is a negative result. The man is not his highest self. There is also a positive aspect in that he becomes his next lowest self. Features of his character and personality which normally were hidden now appear.

This impairment of function of the highest levels may be manifest after a head injury for some time after the function of memory returns. I think this is usually the case, and that the person who has been, as we say, concussed can remember a period of time during which he is aware that he behaved in a manner foreign to his normal self. Some of you may have experienced concussion, and will be able to affirm or contradict this generalisation. I mention this only as one point in evidence of the fact that mental disorder after head injury is by no means confined to the period of amnesia. It may indeed occur in cases where there is no amnesia at all.

The fact of amnesia in the story of a head injury, however, is an important point. Its presence or absence is easily determined, and its duration simply measured. Even a long time after the accident one can measure it by finding out from the patient when, after the accident, he became continuously aware of his surroundings. The assistance of his relatives may be necessary to determine this. They may be able to supply details of the patient's behaviour or of what happened around him which provide, so to speak, the time background.

Even when we have the patient under our own observation we may be deceived in the most surprising way in attempting to estimate the duration of the amnesia. In the first place, his behaviour may suggest that his memory is functioning normally, and in the second he may invent or confabulate in very much the same way as the chronic alcoholic. So if we ask him what he has done this morning, he may reply in a very natural and obliging manner that he has been talking to a friend; but if we ask him the same question five minutes later, he may say that he has been out for a drive in a car; and we may find that in reality he has been in bed the whole time, and has had no visitor.

It is necessary, therefore, to be sure that the patient is normally oriented for place, time and person, and that he has an accurate memory for the events of the past few hours, before one can judge that the phase of amnesia is at an end. Later, the estimate can be checked by asking him what were the events which he first clearly remembers after the accident, and finding out when the function of memory became continuous. Before this happens there may be some partial memory of an outstanding incident or two, which the patient himself recognises on looking back as incomplete and abnormal.

I have dwelt at some length upon the estimation of the period of traumatic amnesia because it is an important part of the record of any case of head injury in which there has been disturbance of consciousness. If I am told of a patient that he was severely concussed, I have no very clear idea of what this may mean. Even if I am told that he was unconscious for two days, I do not know where I am, unless I know exactly what was the observer's definition of unconsciousness. But if I am told that so-and-so after his accident had a traumatic amnesia of so many hours or days, I have at once a clear idea up to a point of what happened. I suggest that the term "traumatic amnesia" might be generally adopted in the parlance of head injuries, used in this sense. It provides us with something that can be measured. As it is, we are encumbered with loose terminology. The word "concussion," for instance, is used in all sorts of senses. Some use it to denote traumatic amnesia, others to cover all the symptoms which may follow head injury with or without disturbance of consciousness. Concussion is a term which from long usage has acquired traditional value, both inside and outside the profession. It is therefore worth preserving, but might well be used in a comprehensive sense to include all the general symptoms of cerebral injury as opposed to special symptoms, such as hemiparesis, cranial nerve palsies, fracture of the skull, and so on. Then we might speak of a patient as having suffered concussion of the brain with a traumatic amnesia of two days or of another that he had had concussion *without* traumatic amnesia, but with severe traumatic headaches and giddiness.

Especially, I think, in describing the common symptoms of head injury do we want to avoid terms which belong to the vocabulary of morbid anatomy. This is my objection to speaking of

the *symptoms* of cerebral contusion. There is nothing more satisfactory in medicine than to be able to describe a collection of symptoms as belonging to an organic lesion of the kind which one may demonstrate in a glass jar—as one may describe the symptoms of appendicitis or coronary occlusion. There is only one kind of justification for such a use of pathological terms in clinical description, and that is, the repeated demonstration of the same symptoms in association with the same lesion. Such a correlation has never been established as a foundation for the use of cerebral contusion to describe the mental disorder, headache, giddiness and other symptoms commonly following head injury. In a few cases presenting such symptoms a decompressive operation has revealed contused brain. In most of these cases the operation has been performed on account of symptoms suggestive of a focal lesion. They are therefore probably exceptional cases. It is true that cerebral contusion is present at post-mortem in cases that are rapidly fatal, but that is no warrant for supposing it always to be present in the cases that survive. Clinical observation suggests that direct injury to the nerve cells of a minute character is at least as likely to be the cause of the symptoms I have mentioned as a coarse lesion such as contusion. It would be better, I think, to abandon the term " contusion " altogether, or to reserve it for cases in which there is evidence of a coarse lesion, such as hemiparesis or hemianopia. For description of the common symptoms we might use the generic term " concussion " in the comprehensive sense which I have suggested, and employ sub-headings—traumatic stupor, traumatic delirium, traumatic headache, giddiness and dementia—to denote the variations.

As a measurement of the *duration* of unconsciousness I have suggested that we should use the duration of the traumatic amnesia. It is no less important in the early stages of a severe head injury to have some measure of the *depth* of unconsciousness.

I have elsewhere suggested rough tests for this purpose :—

1. Can the patient be roused to respond to a simple question forcibly put, such as " How are you ? " or " What is your name ? " (Responds to questions.)

2. Does he respond to a forcible command, such as " Put out your tongue," or " Give me your hand " ? (Obeys commands.)

3. Does he respond to a painful stimulus by appropriate movement, for example, does he withdraw his arm or leg when the skin is pinched ? (Reacts to pain.)

4. Is the corneal reflex present ? (Corneals + or —.)

I have no doubt these tests might be improved upon, and should welcome suggestions. They are of value because they provide some kind of a scale by which the depth of unconsciousness or traumatic stupor is simply measured. The first test in the list to which a response is obtained is all that need be noted. For instance, the note " Obeys commands " would denote that the patient did not respond to questions.

Some such measurement is, of course, of especial value during the early stages of traumatic stupor, when we are on the lookout for the rare but disastrous complication of meningeal hæmorrhage. I believe that repeated observation of the depth of unconsciousness at intervals of one or two hours should be a part of the nurse's routine in every case of serious head injury. It is of greater value than the hourly pulse chart which is kept so faithfully. A progressive deepening of unconsciousness is probably the most valuable sign of meningeal hæmorrhage, the others being progressive hemiparesis, the appearance of a dilated pupil on one side, and, of least importance I believe, the slowing pulse.

But apart from its value in the diagnosis of meningeal hæmorrhage, a record, even a rough one, of the depth of unconsciousness constitutes an important part of the case history. In looking up the in-patient records of hospital patients with head injuries, one seldom finds anything that is of value at all. It would be quite refreshing to me at any rate if the discharge note stated that X, on admission, responded to painful stimulation ; that he obeyed commands on the second day ; answered questions on the fourth, and proved on recovery from stupor to have a traumatic amnesia for eight days. This would at once give me some idea of the kind of injury, speaking clinically, that he had sustained.

The kind of mental disorder that we have been considering so far is very obviously organic. There is no difficulty about its assessment as a direct and serious, though temporary, effect of the injury. But there are other mental symptoms, much more difficult to define and to assess, which are common enough in the patient who has suffered a head injury. In the case of a man who has been unconscious, these symptoms do not appear until after the traumatic amnesia has ended ; but in a man who has not been unconscious at all, they may be present from the first, or appear after a day or two.

If we confine ourselves for the moment to the symptoms of mental disorder, as apart from headache or giddiness, what are the common complaints

in patients suffering from the after-effects of head injury? I am going to admit at once that it is difficult to answer this question. One of the difficulties is that the symptoms of mental disorder at the highest levels are determined to a large extent by the mental constitution of the individual. The symptom picture depends not only upon the kind of injury, but upon the kind of brain.

If we consider the brain from a physiological aspect, that is, as the substratum of mind, we may imagine it as built up in layers. The highest layer or function is the most recently developed, the most complex, the most easily deranged. The effect of disease affecting the brain generally, whether it be a poison like alcohol, or injury as in concussion, is first to abolish the function of the highest level; if the injury is more severe, the next level also is put out of action, and so on. Conversely, during the process of recovery, function will return at the lower level before it returns at the higher level. Now at each level we have to consider two kinds of function, one positive, the other inhibitory. The former—the positive function—represents a new level of mental equipment, the latter the power of inhibiting or controlling the level next below it. The former, for instance, enables a man to talk sense, the latter prevents him from talking nonsense. If the higher level is put out of action, he will no longer talk sense, he *will* talk nonsense.

This principle applies not only to the intellectual functions, but to those of mood and personality. The man who, as we say, is *fundamentally* of an anxious or depressed disposition, but who normally maintains a cheerful attitude of mind, will, when the higher level is out of action, lose his cheerful appearance, and become depressed and apprehensive. Thus, as the result of organic damage, we may expect to find impairment of the intellectual powers and changes in the mood and personality. Instead of a first level intelligence and person, we have a second level intelligence and person.

But this is not yet the whole story. As a result of the injury there is disability of a very far-reaching kind. The ability of the sufferer to react as a whole to his inner needs and environment is impaired. The sufferer is conscious of this disability, his consciousness of the disability constitutes a psychological trauma, and to this trauma he is able to respond in terms, not of his best or first level intelligence and personality, but with his next best or second level qualities. It is in this particular respect that the patient suffering from the after-effects of an injury to his brain is at a disadvantage as compared with a patient who has suffered injury to some other part of the body. The man with a compound fracture of the leg has a disability, and a serious one, but he is able to make the best of it with his best self. The man with an injured brain has only his second best self available. His adjustment, therefore, to the situation is often inadequate, or, as we call it, neurotic.

A good deal, of course, will depend not only on what kind of a person he was before the injury, but upon the situation which he has to meet. For the man who is in no danger of losing his job, who has money saved and has no dependents the task of adjustment is relatively easy. His second-best self may not find it too difficult. For the man whose circumstances are the reverse of these, the adjustment is frequently impossible. He breaks down over it, and we have the clinical picture of what is generally called traumatic neurasthenia. This is a term which I do not much like in the present connection, for it is commonly used to include all kinds of functional nervous disorders following any kind of trauma. Hysteria and anxiety neurosis may follow injury to any part of the body, including the head. They are usually centred upon the question of compensation. We need a separate label to denote the functional incapacity resulting from organic damage to the brain. I have suggested "post-traumatic dementia." This emphasizes the organic basis of the incapacity, but has met with criticism from psychiatrists, who would reserve "dementia" for progressive and permanent, as opposed to transient, states of mind. Professor Mapother has suggested "traumatic psychasthenia." I do not like this either. I do not see why we should not use the word dementia to describe a temporary state of organic disability. The person who is intoxicated may equally be said to be suffering from a temporary dementia as the effect of alcohol.

I have outlined some of the factors which contribute to the symptom picture of post-traumatic dementia; let me recapitulate. They comprise the mental make-up of the individual before the accident, which includes both his inherited constitution and what has been acquired through experience; the severity of the injury—whether it has put out of action only the very highest levels, or has gone deeper; and the situation arising out of the disability.

Of these factors that most easily separated from the others is the compensation situation. As we know well enough, the workman who is afraid of permanent disability has a strong inclination to make the most of his symptoms, so that he may cover himself against all possible risks. It is difficult for many men at their best to resist this

inclination. When they are not at their best it is often impossible. The problem of assessing the symptoms of post-traumatic dementia is, I think, most simply approached if we consider, first, a group of cases in which there is no question of compensation in the situation. What are the leading symptoms in such cases—still confining ourselves to those of mental disorder? Slowness and difficulty in thinking, and defective memory, appear on the intellectual side. When symptoms of this kind are severe, they are revealed by formal tests of memory and calculation, but they are often of slighter degree. They are often complained of by the patient, but may be apparent only to his friends; for lack of insight and judgment are not uncommon symptoms of post-traumatic dementia. This is a point of some importance. The patient may think he is quite well when he is far from it. His friends or employers may tell a different story.

Symptoms of disorder in the mood and personality vary with the mental make-up of the individual. Depression is the commonest disorder of mood, but sometimes the patient is talkative and cheerful in a foolish way.

Loss of interest in his surroundings, lack of initiative and, above all, an increased liability to fatigue are common symptoms. When the patient encounters problems which test his mental powers beyond their capacity, he reacts with anxiety, irritability and sleeplessness. It is characteristic of these patients with true post-traumatic dementia that their symptoms are just as evident in the problems of play as in those of work. Loss of interest, for example, extends to their hobbies. Slowness of thinking and defective memory interfere with serious reading and card games. It is in this respect that their symptoms differ from those of hysteria.

Turning now to the physical complaints of these patients, chief among them are headache and dizziness. One type of headache which is very common is associated with difficulty in thinking and is of a continuous dull type, aggravated both by mental effort and physical fatigue. Another type, also common, takes the form of a sharp or throbbing pain, usually localised to one part of the head, brought on or aggravated by stooping or straining and relieved by rest. The dizziness is almost always complained of in the same terms, as a momentary sense of loss of balance or insecurity experienced on stooping or sudden effort. These are the common symptoms encountered after head injury, and it is their association repeated in case after case which must convince the observer of their organic basis.

If we consider a group of cases in which the compensation situation appears, what do we find? Fundamentally, we find the same symptoms as we observe in the non-compensation group, but overlaid and often obscured by anxiety in relation to the situation, and hysterical exaggerations or perpetuations.

The anxiety is a natural outcome of the situation, so also, I think, is the development of hysterical symptoms. Here is a man, conscious of disability, but with nothing to show for it in the shape of a broken limb. As the result of injury to his brain he is less of a man and more of a child. He tends, therefore, to react in a childish way to the situation, and to develop the hysterical tremors, stammering and pseudo-paralysis, which are common features in these cases. It is a matter often of the greatest difficulty to penetrate the psychoneurotic overlay and discover the true state of organic disability in these patients.

This difficulty is much greater for the physician who sees the patient for the first time weeks or months after the injury than for his own doctor, who has had the advantage of knowing what sort of a man he was before the injury, and what kind of situation he has to face as the result if it.

A good many of us, however, are called upon from time to time to give an opinion on a single interview in a case of this kind, an opinion which may be quoted by the lawyers as if it was based upon some undeniable vision of the nervous system at work, as if "frayed nerve fibres" and "damaged cogs" were as plain to the expert eye as the proverbial pikestaff.

What, in fact, are the data upon which we must build our judgment? or rather, what is the best we can do with the job in an hour?

1. Naturally we shall first obtain an account of the symptoms. In most cases we shall be obliged to ask leading questions as to the kind of headache, giddiness and so on. In the assessment of mental symptoms, a few minutes' cross-examination of a relative alone is often worth the time expenditure. Formal intelligence tests—memorising figures, simple subtraction, and so on are worth while in any case in which there appears to be serious memory defect. Important evidence in discrimination between post-traumatic dementia and hysteria is to be found in the way the patient tells his story. The hysteric, preoccupied with his illness, can usually be led on to describe his symptoms with a wealth of detail, and to correct any inaccuracy intentionally suggested by the observer. For everything connected with his injury his memory is, in fact, better than normal.

2. We want to know as much as possible about the symptoms immediately following the accident —the depth of unconsciousness, duration of

traumatic amnesia, first symptoms experienced on coming round.

3. We want to know whether any of the patient's near relatives have suffered from any kind of nervous breakdown; whether he has had anything of the kind himself; what sort of a man he has been, *e.g.*, level of intelligence as gauged by school attainments, work, etc.; capacity for emotional adjustments in relation to war service, unemployment or bereavement.

4. We want to know what kind of a situation has resulted from the accident. Is he in debt? What are the chances of future employment?

Supposing that we are dealing with a compensation case, we can profitably compare our data with those gathered from the evidence of non-compensation cases. Some useful figures are available in a paper by W. Ritchie Russell, who followed up a series of 200 cases with head injury admitted to hospital with loss of consciousness—clearly a group from which the least severe type of head injury was excluded; 139 of these patients were working men and women. Eighteen months after the accident 30 per cent. of the compensation cases reported unfit for work; only 9 per cent. in the non-compensation group. This gives one an idea of the importance of the hysterical factor in perpetuating disability. Age is another important factor. After middle age, recovery from head injury is slower and less complete. In Russell's figures we find that of the patients over fifty years of age 45 per cent. remained unfit for full work at the end of eighteen months.

There is something to be learned also from looking at the relationship between the length of the traumatic amnesia and the duration of disability, especially if this is considered in a group of non-compensation cases under middle age.

The following figures are based partly upon Russell's figures:—

1. Traumatic amnesia of one hour or less: Nineteen out of twenty patients will be back at full work in less than two months.

2. Traumatic amnesia of twenty-four hours or more: A minority of patients will be fit in less than two months. Eight out of ten will be fit within six months.

If, then, for example, we have a compensation case with an admixture of post-traumatic dementia and hysteria in a man of thirty with a traumatic amnesia of less than an hour, who is still disabled three months after the injury, we may reasonably be influenced by the consideration that the chances are 19 to 1 that had there been no compensation situation this man would have been at work before now.

If, however, our patient were over fifty at the time of the accident, the odds in favour of his being fit at the end of eighteen months would be little better than even. We most of us are inclined to give the patient the benefit of any doubt as to his prospects of recovery. Some of us who guard the interests of insurance companies have a bias in the opposite direction! But if we discount prejudice a sound judgment remains impossible without adequate data. What these data should be I have tried to indicate. We should, I think, insist on their value in court cases. We are not popular with the lawyers when we do so. They like something concrete in the shape of an X-ray film. But it is a part of our responsibility to the public that we insist that a fractured skull is of import only in so far as it is a measure of the degree of violence. What matters is the injury to the brain, and in default of physical signs we have to estimate its ability, or inability, to perform its task by a painstaking assessment of symptoms.

ILLUSTRATIVE CASES

A.—Commander X. 30. First seen 4½ months after accident.

1. He had been admitted to hospital unconscious. On his discharge from hospital five weeks later he felt so well that he thought he would go back to work in three or four weeks' time. On trying to get back to a normal routine, however, he complained of:—

Headache;
Giddiness;
Thickness in the head.

(*a*) Headache.—
Occipital and sub-occipital.
Splitting.
On waking a.m.
After effort, *e.g.*, walking or climbing stairs.
Lasing an hour or two.

(*b*) Giddiness:—
On quick movement.
Transient.

(*c*) Thickness in the head:—
Feeling of unreality.
Can't read serious literature, only novels.
Can't play bridge.
Memory not so good; have to write things down.

Getting better.

Had come up to London for Christmas (London born and bred), but found all his symptoms aggravated by traffic and crowds.

Examination.—Would pass for normal, but slower than average over calculation and memory tests.

2. There was no record of the depth of unconsciousness in the early stages; the report was "comatose for about ten days." The traumatic amnesia covered fourteen days. He could not tell me anything about his first symptoms on recovering consciousness; he told me he had felt quite well. (I want to return to this point later.)

3. There was no history of nervous breakdown in his family or past history. He had done well at school and in the Navy, but his aunt told me that he had always shown a tendency to what she called laziness and defeatism, and had needed stimulation to get the best out of himself.

4. He was a bachelor without dependents, and had some private means in addition to his pay. His prospects in the Service were not likely to be impaired by a year's sick leave.

Summary

The duration of traumatic amnesia indicated a severe disturbance of cerebral function. The headache and giddiness conformed to the usual pattern. The mental symptoms were those of a mild traumatic dementia. There were no psychoneurotic symptoms. The situation for the patient was an easy one. It was possible that he would later need persuasion and encouragement.

This was the opinion formed a year ago. He steadily improved, but needed stimulation, as had been anticipated. For instance, he had been a keen bridge player. Having found himself unable to play as he used to, he gave it up, and had to be persuaded to start again.

A year after his accident he was back at full duty with only three complaints:—

1. He tired more easily than before, physically and mentally.

2. He had less control, *e.g.*, when angry with stupid sailors he would show irritability.

3. He was more easily affected by alcohol. "After four sherries before dinner I feel I've taken a lot—ludicrous."

One point in this case I promised to refer to again. The patient could give no account of the symptoms first experienced after coming to himself. I think it highly probable that if notes had been kept of his progress, symptoms would have been recorded, and that the gap in the story was due to the fact that his memory for that phase was defective.

This is a point of some practical importance. I went once to see a lad who had had a head injury two days previously, and had been admitted unconscious to a cottage hospital. I was told by the doctor that he had recovered consciousness in a few hours, and appeared quite fit. I found the patient sitting up in bed. He seemed quite alert, and answered simple questions readily. I asked him if he had any headache, and he said, "No, none," which confirmed what the doctor had told me. But the nurse intervened to remind him that he had been complaining of headache a great deal at intervals, and had occasionally asked for aspirin. His comment was, "Oh, have I?" When I saw this patient a month later, he told me that he knew that I had been to see him in hospital, but had no visual memory of the event, and did not recognise me.

B.—Y. 40. Porter. Seen five months after injury.

1. He complained of:—
   Headache;
   Fits;
   Impediment in speech;
   Giddiness.

The headache was continuous, like a spike being driven into his head; continuous; not improving.

The fits occurred when his head was bad. His landlord had found him in one, rolling in the bed, unconscious and clutching his head with his hands.

The giddiness occurred whenever he stooped.

The impediment in his speech showed itself as a hysterical stutter.

On examination he showed hysterical tremor and weakness. He showed no defect of concentration or mental fatigue in describing the accident and his symptoms.

2. While riding a bicycle on an errand he skidded and fell, striking the back of his head. He was not unconscious, and was able to remount the bicycle and complete the errand.

He suffered from headache during the next fortnight, but continued at his work. He then had an attack of giddiness on stooping, and reported to his doctor, who certified him unfit for work, and at the time when I saw him considered him still unfit and suffering from traumatic epilepsy.

3. He had failed to reach the top standard at school, and had never held any job for long, having worked as labourer, fireman and pit worker. He served during the war, and was invalided out with neurasthenia.

4. He was married with no children. He had held his job as handyman in a West End shop for five months before the accident. Before that he had been unemployed for four months. He had lost his job owing to his illness.

Summary

There was no traumatic amnesia. The injury was of minor degree. Nevertheless headache, giddiness and mental fatiguability may follow such an injury. His description of the giddiness rang true to the organic pattern; that of his headache did not. In a man of his age after such an injury, if there had been no compensation situation, the odds would have been very high against any residual disability existing at this time after the accident.

There was abundant evidence of hysteria. His past record showed a neurotic disposition. The conclusion was that his disability was entirely neurotic, and would clear up within a month of the date when compensation was settled.

C.—Miss Z. 50.

11.30 p.m.—Knocked down by taxi; bruised left side of body; no external injury to head. Momentarily deeply unconscious; afterwards confused, vigorous, talkative. Admitted to hospital within ten minutes. Confused, but able to answer questions; no abnormal physical signs.

12.45 a.m.—Did not answer questions or obey commands.

2.15 a.m.—Responded to painful stimulation by withdrawal of right limbs only. Flaccid weakness of left limbs. Bilateral extensor plantars.

Operation at once. Large right-sided epidural hæmorrhage.

Before the operation breathing was Cheyne-Stokes. Completely recovered.

The Conservation of the Teeth

The Presidential Address to the Guy's Hospital Dental Society, October, 1937, by W. E. Herbert, Esq., L.R.C.P., M.R.C.S., L.D.S.

GENTLEMEN,—We are all familiar with the ravages of dental disease amongst modern civilised communities, and I doubt whether there are any here who have not personal experience of it.

Its extent was brought home to me recently when, together with a Dutch dental surgeon, I had occasion to examine a group of people in this country and in Holland with a view to comparing their dental conditions. The loss of teeth from caries and parodontal disease was not very different in the two groups, and out of 1,000 people between the ages of 30 and 60, 45 per cent. had less than half the normal masticatory surface, even when artificial teeth were included in the calculation.

The English group consisted of out-patients attending this hospital, but did not include many of those who submit themselves to our efforts in the Conservation Room. I think these figures give a rough idea of the state of the teeth of a large section of the community who receive only casualty dental treatment, *i.e.*, removal of painful and diseased teeth together with some prosthetic restorations.

The dictionary meaning of the verb "to conserve" is "to keep from loss, decay or injury," and if this meaning is applied to the conservation of the teeth, we must admit that our efforts are far from successful. Indeed, as far as the treatment of caries is concerned they are largely restorative.

I felt, therefore, that it would be appropriate to make a brief inquiry into the progress which has been made in the elucidation of the ætiology of dental disease in order that we may see what hope there is or is likely to be of preventative measures being adopted which will keep the teeth from loss or decay.

Whilst I believe it is true to say that more teeth are lost from parodontal disease than from caries, and that in many cases where the local factors appear to predominate, conservative measures are often very successful, I propose to consider mainly the problem of dental caries.

That dental caries is in some way associated with civilised conditions has long been recognised. The teeth found in prehistoric skulls show little evidence of it, and existing primitive races are remarkably free until they come under the influence and customs of our civilisation, when they soon begin to show a high incidence. In primitive Maoris the incidence is .75 per cent., whereas in civilised Maoris it is 90 per cent. The skulls of ancient Egyptians show little sign of caries until about 5000 B.C., when under civilised conditions it became as common as it is in modern European countries.

In modern civilised communities caries is practically universal, and there is thought to have been an increase in the disease in the last sixty to seventy years.

THE CHEMICO-PARASITIC THEORY

This theory of the causation of caries which was formulated by W. D. Miller about 1882 has been the most generally accepted theory for many years.

Briefly stated, the first stage is the decalcification of the enamel by acids, chiefly lactic acid caused by fermentation of carbohydrate foodstuffs. The enamel contains such a small percentage of organic material that the latter is washed away and a cavity formed. The dentine is then decalcified in a similar manner and its organic matrix subsequently destroyed by proteolytic organisms. Since in a healthy mouth the portion of the tooth exposed to the oral fluids is entirely covered with enamel, it is the initial attack on this structure which is of supreme importance. This theory covers many of the clinical features of caries. It had long been recognised that certain parts of the dentition, such as pits and fissures and the chinks between adjoining teeth, were expecially liable to decay, and Dr. G. V. Black showed that these were the positions where food debris was likely to collect and designated them as stagnation or danger areas. Incidentally, his classification of cavities is based largely on this observation.

The idea was further developed by Sim Wallace, whose views on the prevention of dental caries set out in a series of papers from 1905 onwards have formed the basis of most efforts at prevention up to the present day.

The prevalence of caries amongst civilised communities was put down to the softer character of the food which tended to cling about the teeth, and especially to the great increase in consumption of easily fermentable carbohydrates. To overcome this it was suggested that food of a tough, coarse nature should as far as possible be chosen, and in the event of sticky carbohydrate food being taken this should always be followed by food of a fibrous nature, such as celery or an apple. In addition to this, artificial methods of cleaning were advocated, preferably after every meal, but particularly last thing at night.

In this country an improvement in the condition of children's teeth was noted during the period of the war, when less sugar was available and fewer sweets eaten.

There is no doubt that the views of Sim Wallace are an important contribution to preventative dentistry, and there are examples of institutional children who have been brought up free from caries on his regime. Furthermore, we all know the hopelessness of carrying out restorative work for a patient who will not co-operate in keeping the mouth clean. That the theory does not fit all the facts is, however, evident, firstly because we occasionally see mouths in which there is extensive lodgment of food debris and yet no caries, and secondly, because individuals show varying susceptibility to the disease at different periods which cannot entirely be accounted for by lapses in oral hygiene.

Furthermore, we might expect that the efforts which have been made for many years to attain improved dental hygiene would have produced some marked reduction in the incidence of the disease, but this does not appear to be the case.

Whilst it may still be true that an apple a day keeps the doctor away, we must admit that even three apples a day are not quite adequate to deal with the dental surgeon.

Since the initial attack of caries is upon the enamel, the structure of this substance is of the utmost importance. At the time the chemico-parasitic theory was formulated the view of Tomes that enamel was an inert, impermeable, unchanging non-vital structure, with no organic content, was generally accepted. More recent experimental work has modified that view, and, after careful review of the work of Mummery, Malleson, Sprawson, Fish and Jeffery, Sir Norman Bennett concluded " that the enamel is a vital structure nourished from within as far as its extreme outer border and possibly accessible in some degree to influences from without." This view of enamel brings the teeth into line with other epithelial structures such as the skin, the hair and the nails, which are known to be within reach of the vital influences of the body. The only important difference is that the teeth once formed are capable of little change, whilst these latter structures are of persistent growth and their tissues are therefore being constantly renewed.

STRUCTURE

In recent years a great deal of experimental work has been done on the effect of diet and nutrition on the structure and development of the teeth. Since the large bulk of the teeth consists of calcium phosphate, attention has been directed to the metabolism of calcium and phosphorus. The main sources of calcium in food are milk, cheese, butter, eggs, green vegetables and nuts, and a normal varied diet containing adequate amounts of milk will ensure an adequate supply of calcium and phosphorus in their proper proportions. It is most important that there should not be a deficiency of these substances at the time the teeth are being calcified. The calcification of the deciduous teeth commences about the twentieth week of intra-uterine life, and in the first permanent molar just before birth. The crowns of the third molars are completed at about twelve, and the roots from eighteen to twenty. In order to avoid structural defects in the teeth it is therefore most important to guard against diet deficiencies throughout childhood.

Lady Mellanby in a series of experiments on dogs extending over many years has shown :—

1. That teeth of good structure can be ensured by a mixed diet containing an adequate supply of calcium, phosphorus and Vitamin D, and that the amount of calcium and phosphorus required varies with the intake of Vitamin D.

2. That without a sufficient supply of Vitamin D defective calcification is certain.

3. That variations in the degree of calcification at different periods can be produced by changes in diet.

4. That cereals have a deleterious effect on calcification.

5. That defective structure can be produced by feeding the mother on a diet deficient in Vitamin D, though this may be compensated to some extent by drawing on the maternal store.

Later experiments with the rat and the rabbit showed similar results.

Vitamin D is contained in certain fats which are among the more expensive articles of diet, and are therefore not available in sufficient amount to a large section of the community. It is estimated that 80 to 90 per cent. of the elementary school children of this country have a diet which is deficient in Vitamin D.

Lady Mellanby made histological examinations of a large number of children's teeth, and found that structural defects similar to those found in her experimental animals were extremely common. These defects consisted in pigmented enamel and the presence of many interglobular spaces in the dentine.

Considerable discussion has arisen as to the importance of these structural defects in the ætiology of caries, and there appears to be no conclusive evidence available to show that this pigmented enamel is more liable to caries than enamel of perfect structure. The evidence regarding gross hypoplasia such as we see following the exanthemata, particularly measles, is somewhat conflicting, but most dental surgeons seem to find that such teeth are not unduly liable to caries. When caries does occur the condition of arrested caries is often seen, and is probably explained by the poor structure of the enamel, which readily breaks down, exposing the dentine to the friction of mastication. Another form of gross hypoplasia which has received careful study is that known as mottled enamel. When in 1909 Dr. G. V. Black first examined a district in the Rocky Mountains where practically the entire native population was affected, he concluded that mottled enamel was not more liable to caries than normal enamel, and recent work by McKay in America and Ainsworth in this country has confirmed this view.

It is possible, however, that microscopic defects in structure may be more important than the macroscopic which we recognise in hypoplastic teeth following illnesses or in mottled enamel.

In any case it seems reasonable to suppose that if we are endeavouring to prevent disease one of our first concerns should be to ensure perfect structure of the tissues we are hoping to protect.

CONSTITUTIONAL FACTOR

Neither the chemico-parasitic theory nor the views of Lady Mellanby and her co-workers on structure entirely explain the phenomenon of varying susceptibility to caries, and it would seem that we must search for a third factor of a constitutional nature. If the conception of enamel as a vital structure be tenable, this may be some vital resistance acting from within or a local effect produced by some change in the saliva.

Saliva

A great deal of experimental work has recently been carried out on saliva because it has been felt that the fluid which bathes the teeth might be expected to have some influence on caries.

The mechanical action of a copious supply of watery saliva in keeping the teeth clean has long been recognised, and Sim Wallace advocated its stimulation by acids as a means of prevention.

Chemical estimations of the saliva have been concerned mainly with the calcium content and the acid base balance. Many workers are in agreement that a high calcium content of the saliva is associated with immunity to caries and a low content with susceptibility. Broderick believes that variations in the acid base balance of the saliva which correspond with variations in the body as a whole are responsible for varying degrees of susceptibility to caries and pyorrhœa. When the acid base balance of the body passes to the acid side the reserves of calcium are drawn upon for neutralisation, and in the case of the saliva calcium is withdrawn from the enamel. If this be so it is difficult to see why the withdrawal of calcium is limited so definitely to stagnation areas.

The work of Fish and Jeffery on the permeability of enamel to dyes shows that there is an outer layer which is impermeable to penetration from without. Work is at present being carried out by Shearer and Thewlis at the National Physical Laboratory in which sections of enamel are examined radiographically and the density of various parts of the shadow estimated by means of a photometer. These experiments confirm the view of an outer skin of enamel, and show that it is more highly calcified than any other portion of the tooth. It would seem, therefore, that variations in the saliva could only affect susceptibility to caries by providing a suitable or unsuitable

medium for the growth of the acid-producing organisms, and it is doubtful whether the problem of susceptibility can be entirely explained on these lines.

Clinical observations of caries indicate that it is a disease to which we are more prone in the early years of life, there being a decrease in the incidence as age advances. It has been suggested that this decreased incidence is merely due to the removal of susceptible areas and their replacement with inert materials as cavity after cavity is excavated and filled, but I do not think that this explanation is adequate.

It is generally agreed that periods of special susceptibility occur during adolescence, pregnancy, and following severe illnesses.

It has further been claimed that in old people a sudden attack of caries may be a sign of impending dissolution, an observation which is difficult to confirm since most elderly people have no teeth.

Vital Influences Acting from Within

If this be so we should expect to find some evidence of defensive action on the part of the tissues such as one finds in soft tissues when invaded by micro-organisms or irritated by chemical or physical agents.

John Tomes was the first to describe any such response, when in 1848 he demonstrated a translucent zone in dentine beneath a carious cavity. He claimed that this was due to hypercalcification and was evidence of a vital physical change in the dentine itself. The fact that this zone cannot be demonstrated in cases of artificial caries, or caries arising in dead teeth, supports this view, which is now generally accepted.

Mummery subsequently observed certain appearances in enamel which suggested that similar translucent zones may occur in this structure in response to surface lesions.

Recent work by Fish has shown that the protective response of the dentine consists in the laying down of a calcific barrier which is impermeable to fluids, and that this barrier may be either a translucent zone which is a zone of hypercalcification in the primary dentine, or secondary dentine which is a calcific scar sealing off the injured and dead tubules from the pulp, these two reactions depending upon the severity of the lesion.

Our susceptibility or immunity to other diseases depends upon a non-specific general resistance which is largely dependent upon correct metabolism, aided in many cases by a specific bacterial immunity. Evidence of defensive action on the part of the dental tissues suggests that similar factors may play a part in governing our susceptibility to caries.

In recent work published by Macphee, the author claims to have demonstrated a definite precipitin reaction between emulsions of carious dentine and serum, this reaction being more intense with serum taken from patients free from caries. It is suggested that this reaction, though weak, points to the possibility of caries being due to a specific bacterium or virus, but efforts to establish this have so far proved unsuccessful.

It has already been said that diet deficiency and nutritional disturbances due to prolonged illnesses may produce definite defects in the structure of the teeth, nails and hair, and it seems possible that less severe metabolic upsets may well be responsible for failure of our resistance to caries. Indeed, there is already considerable evidence to support this view.

The fact that an increased susceptibility occurs during adolescence and pregnancy points to a metabolic cause. With regard to pregnancy it is known that in cases of calcium deficiency, calcium is withdrawn from the bones, and it has been thought that the teeth may suffer in a similar way. Fish has, however, shown in animals that the calcium content of dentine is remarkably stable and unaffected by deprivation of calcium in other parts of the body. It has recently been suggested that increased susceptibility is due to a more acid reaction of the saliva and perhaps affected by morning sickness. Another epithelial structure which seems to suffer during pregnancy is the hair, which tends to fall out after the pregnancy has terminated, and it seems more reasonable to assume that increased susceptibility to caries and falling out of the hair are both due to some constitutional factor acting from within and probably of a nutritional nature. I would suggest that, with improved ante-natal diet, increased susceptibility to caries during pregnancy is becoming less common, and I know of cases where with an adequate diet including extra calcium and Vitamin D no new cavities have occurred. Perhaps statistical evidence along these lines might be obtainable from the ante-natal centre of this hospital.

Lady Mellanby and her co-workers have published a series of papers on the effect of diet on the teeth of school children. The first experiment carried out at Sheffield on comparatively small numbers showed that the giving of Vitamin D produced some reduction in the incidence of caries. This encouraged the Medical Research Council to initiate the more extensive Birmingham experiments, the final report of which has recently become available. The object of the experiment

was to determine the effect of adding extra Vitamin D in the form of radiostol or cod liver oil to the existing diet of certain institutional children.

In the first experiment the children were divided into three groups, the first being given a daily additional ration of treacle, the second olive oil, and the third cod liver oil. The children were inspected dentally at intervals, and after three years the cod liver oil group showed a lower incidence to caries than the other two groups, though they were by no means free from the disease. Similar results followed in a second experiment, where one group was given additional olive oil and another olive oil and radiostol.

Sprawson carried out experiments on a small number of institutional children with regard to milk, and showed that those fed on boiled or pasteurised milk had more caries than those fed on raw cows' milk. He further claimed that even when this was not given before the age of ten the incidence of caries in second permanent molars was reduced.

These experiments indicate that dietetic factors influence susceptibility to caries after the teeth have erupted. Are we to infer that Vitamin D has some specific action in inhibiting caries? If this were so we should expect the degree of immunity attained to have been much higher than was actually the case. It has already been said that 80 to 90 per cent. of the school children of this country suffer from a deficiency in Vitamin D. It therefore seems probable that the improvement obtained by giving extra Vitamin D was brought about by the correction of one dietetic fault.

This view is supported by the work of Boyd and Drain, who maintain that caries is primarily due to a metabolic disturbance, and that for its control a more accurately balanced diet is required than is necessary for the maintenance of a reasonable degree of health elsewhere in the body.

The first observations were made on a group of diabetic children who had a high incidence of active caries when admitted to hospital for treatment. After eight to ten weeks on a normal diet with an adequate supply of insulin to balance the sugar intake there was definite evidence of arrest of caries. Similar observations on other groups of patients in hospital encouraged attempts to correct the diets of patients applying for dental treatment. The faults commonly found were the crowding out of essential foods by too much carbohydrate, the omission of cod liver oil, too little milk, inadequate amounts of fruit and vegetables, and the irregularity with which essentials were taken.

By the correction of such faults as these the authors claim to have obtained complete arrest of the carious process in the majority of cases treated.

It is seen, therefore, that diet may be concerned in the ætiology of caries in three distinct ways :—

1. The physical nature of the food.
2. The chemical nature of the food during the development of the teeth controlling their structure.
3. The chemical nature of the food after development, which is probably the most important factor in controlling susceptibility to caries.

It is clearly a problem which will not be completely elucidated without the closest co-operation between the dental surgeon and the bio-chemist.

It is a curious thing that a primitive race such as the Australian aborigines, who depend for their food on their skill in smoking out an opossum or hunting a kangaroo, should apparently not suffer from diet deficiencies, whilst in civilised man, who often has a wide choice of food-stuffs, such deficiencies are common.

One aspect of the question is largely economic, for it is known that certain sections of the community do not obtain an adequate diet.

The question of diet and nutrition is now being seriously considered by the medical profession in this country and abroad. The improved physical development, general health, and resistance to infection which has been obtained in many countries by supplementing the diets of school children with milk is sufficient evidence that diet deficiencies are very common, and minimal standards have been produced by the British Medical Association and by the Health Committee of the League of Nations.

In a recent survey of the food position of this country Sir John Orr has estimated the average consumption of the main foodstuffs at different income levels, and compared these with the optimum requirements for the maintenance of perfect health. The tentative conclusion reached is that a diet completely adequate for health is obtained at an income level above that of 50 per cent. of the population.

Another factor which is probably of considerable importance is that whilst primitive man appears to have an instinct for selection of food according to the needs of the body, civilised man with greater choice tends to lose this instinct, and foods are chosen more and more for their pleasurable taste. Thus the sticky forms of carbohydrate food are often consumed far in excess of the needs of the body and leave no appetite for the essential foods rich in proteins and vitamins.

The self-feeding experiments of Davis show that this instinct for food selection is present in the young, and suggest that appetite is a valid

guide only when fresh natural foods are used and prepared by the simplest methods of cooking. In this experiment fifteen infants between the ages of six and eleven months, who had previously had nothing other than milk, were allowed to select their own food three times a day from a large number of raw or simply cooked natural foods. All the children developed remarkably well, and none of their teeth decayed during the course of the experiment, which extended over periods varying from six months to 4½ years. Two of the boys who continued the regime up to the ages of 8½ and nine remained free from caries.

The facts which have recently come to light regarding the people of Tristan da Cunha encourage one to believe that when the choice is somewhat restricted this instinct can be recovered. The population of this island, which now numbers about 163, was originally solely British, but has received additions of American, Dutch, Italian, Danish, Cape and St. Helena people at various times. It is difficult to imagine that the early settlers coming from these sources about a hundred years ago were all free from dental disease, yet when examined five years ago not only was this the case, but they were found to be of excellent physique and entirely free from the other diseases to which civilised man is commonly prone. With one notable exception deaths have been due only to accident or old age. Their diet consists of potatoes, milk and eggs, fish and sometimes meat. Whether they would have selected so wisely if a plague of rats from a shipwrecked boat had not prevented them from growing wheat and therefore making flour, or if ships had been able to call more frequently and supply them with sugar, is open to question. The publicity which they received in the press and elsewhere in 1932 has resulted in an increased supply of these commodities, and a recent report of their dental health shows that caries is now appearing in spite of a consignment of tooth-brushes.

Professor Ryle in his address to the British Dental Association at Cambridge this year stressed the need for a more general investigation to test the validity of the nutritional hypothesis, and suggested that this should be carried out with the co-operation of dental surgeons, doctors, a scientific investigator with experience of nutritional work, and the Public Health Authority in the area selected. The purpose would be to make a comparison over a period of years of the general and dental health of a group of people fed on as perfect a diet as modern knowledge can produce, with a similar group whose diet had not been corrected. Such an investigation would be welcomed by the entire dental profession. It might perhaps be wise to commence with a small group, the first aim being to see along the lines of Boyd and Drain's experiments, whether a well-balanced diet adequate in all respects will result in freedom from caries. In planning such a diet, comparison might well be made with the diets of primitive people who are free from caries, though other factors such as environment and exercise will play a part. Bio-chemical examinations of blood and saliva from a group thus correctly fed should provide optimum standards, and a comparison with similar estimations on susceptible patients should throw further light upon the problem.

If it is found that freedom from caries can only be attained on a rigid dietetic regime, the probability is that most people will prefer their caries. It is very unlikely, however, that this will be so when one considers the varied diets upon which primitive peoples maintain perfect health, and we must hope that with further knowledge the intelligent following of a few simple rules will result in correct feeding.

If the view that freedom from caries depends upon a more accurately balanced diet than is required for the maintenance of a reasonable degree of health elsewhere in the body, is found to be correct, there may come a time when the appearance of a carious cavity is recognised as the first sign of a metabolic upset.

How could such an investigation be financed? The Medical Research Council has already spent large sums in supporting researches into the causation of dental disease, many of which I have referred to, and it is to be hoped that they will continue to support dietetic investigations which aim at prevention.

The Dental Board, to whom you will all have the privilege of subscribing £3 10*s.* 0*d.* per annum as soon as you are qualified, will undoubtedly be willing to play their part, but it is questionable whether the main cost of investigations which aim at the elimination of the dental profession should be borne by the profession itself.

If the group chosen for investigation was not able to afford an adequate diet, as would probably be the case, this would have to be supplemented, and financial support from public funds would be needed. Perhaps this would be forthcoming if the defence possibilities of the scheme were emphasized.

At the present time efforts are being made to extend facilities for dental treatment to all classes of the community. The school dental service, though still vastly under-staffed, is adequate in some districts, such as Cambridge, to ensure that all children reach the leaving school age without loss of permanent teeth. There is still a serious

gap between the leaving school age and the time the patient comes under the National Health Insurance. Even then the benefit is not available to all insured persons, and those to whom it is available are not always able to pay their portion of the contribution.

The case for making a statutory dental benefit along the lines of the medical benefit is presented to the Minister of Health from time to time, but at the moment the necessary financial support is not available. Assuming that 10 per cent. of insured persons accepted treatment under such a scheme, the cost to the Government is estimated at seven millions per annum.

If the National Health Campaign is successful, we may find that 100 per cent. of insured persons will make use of such a benefit when it becomes available, in which case the cost to the Government will be 70 millions per annum (one-fifteenth of the total national expenditure on food).

A much smaller sum spent upon a nutritional investigation might result in a more precise knowledge of the means of prevention and alter the whole problem of dental treatment in the future.

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Reviews

John Melly of Ethiopia. Edited by KATHLEEN NELSON and ALAN SULLIVAN. Published by Messrs. Faber & Faber, Ltd., 24, Russell Square, London. Pp. 284, with 16 Illustrations and 1 Map. *Price* 8*s.* 6*d.*

THIS is the story of one who gave up his life for others after having given it to them while he lived. We may be proud that England still breeds such men; and glad that some come into the medical profession. He belonged to the generation that went straight from school to the slaughter-house, and the photograph of Second-Lieut. J. Melly shows the delightful type of boy that came out to us; and then, just as we got to know him, went down the line mutilated, if he were lucky, to an extent that would prevent his coming back again. His parents may be considered to have been fortunate. At a time when to become a second-lieutenant was almost synonymous with a death penalty, one of their two boys came back to them. It was the normal thing for parents of two boys of that age to lose both. Those of us whose children have grown up since can never appreciate what our seniors went through. Even those upon whom fortune smiled were submitted to the continued dread of a footstep coming up the garden path with a telegram from the War Office; and this went on minute after minute and hour after hour for days and months, and in some cases even years. One wonders how any of their minds stood the strain. After the war young Melly went to Oxford, where he enjoyed himself and read for a medical career. He then came up to St. Bartholomew's, where he became a friend of H. P. Nelson, to whom also it has been given to die for his profession. The great school of St. Bartholomew's has never mourned a nobler couple.

His life has been stitched together largely by extracts from his own letters, which show a sincerity of purpose and a gaiety of nature that makes them good to read.

Probably the Archbishop of Canterbury will admit that this life belies the contention that the

present generation of young men is not religious. But then his tenets coincided with those of the Archbishop. He differed from the majority, also, in that he allowed these to flow over from his actions to his speech in a manner that is generally distasteful to our race. He was an evangelist from his earliest days, but the way in which he brought religious subjects into his letters, and, presumably, into his speech, is so naive that no one could object to it. It is probable that that much-abused word, "hypocrite," was never applied to him. Whether at Marlborough, in the Army, or at Oxford or St. Bartholomew's there is nothing to suggest that he was ever worthy of it. With it all he was light-hearted and "radiated happiness." He had that rare combination of religiosity with a kindliness of heart. This may have been associated with a carelessness as to what others thought of him. This trait is suggested to his good by the story of how he prevented a little girl from getting a contraction of the legs after a burn by daily dancing the Charleston with her in the wards, and to the contrary by refraining to change his dress-coat on return from a dance before doing a very late night round at 2 a.m. After doing house appointments he was not faced with the impelling need to take some job to keep himself from starvation; and there followed five years in which he must have squeezed the most out of life. "He was interested and amused—he did a fair amount of work—he travelled much—he made innumerable contacts and friends—he radiated happiness." He paid a visit to America, did a job at the Hampstead General, another in a Cunarder for a luxury cruise, and was then able to spend a year at Edinburgh reading for his Fellowship, which he passed at his third shot. Envy may still stir the blood of those to whom such a grand tour was not given as a culmination of their education; but experience does not bear out the expectation that such a period may give a greater tenacity of purpose than the more usual struggle to which the majority of young doctors are submitted. To this experience Melly was the exception. Throughout this time he had always intended to be a medical missionary. We may feel confident that he was all the better for having had an experience of the world, with the zest for life that we realise he had from reading the letters published at the end of Part I of this book.

He chose Ethiopia for his field. No great idea ever fructifies unless the vision comes first. Practicability and finance must come after. Perhaps that is why so little is done in this world. People will not put their minds to a need until they see their way to carrying it out and have the money to start. It may be wrong to begin without the money; it is certain that the money will not spring from somewhere to pay for an idea that is not yet formulated. John Melly went out to Abyssinia with the idea of a medical school in his mind and the blue-prints of a 300-bedded hospital in his pocket, which he had had drafted by a friend after visits to various hospitals in London. Why he failed to found his medical school and what he did instead until he died at the hand of a frenzied Abyssinian are known in part to the world and may be read in detail in the second part of this book. But it is not the business of a review to epitomise, and we shall not tell the story here.

* * * * *

This story does, however, raise problems of importance to everyone to-day who ponders over what has recently happened at Guernica and Shanghai. There are two problems raised, one is the attacking of a Red Cross unit, the other is the attacking of a civilian population. It is not generally realised that both these things have arisen as a result of the development of the aeroplane. The pre-war Geneva Convention belonged to a period that did not know it. Red Cross units did not come within range of enemy fire, except those attached to the mobile troops. Unless street fighting occurred, the civil population were safe, since the days of the sacking of towns after capture were passed. The aeroplane changed all this. No medical unit was beyond range of the arm. Civilian populations could be attacked as readily as troops. But the margin of error of fire of bombs from aeroplanes is very great unless the planes come so low that they run a serious risk of destruction. As a result Red Cross units are nearly always so near troops, dumps and railheads, which it is quite legitimate to attack, that it was in the Great War almost impossible to make a tactical attack by aeroplane without hitting a Red Cross unit. The writer of this review knew of five such units that were hit by enemy fire. On the other hand, he knew of two units where the action of the enemy could only be explained on the ground that they were intentionally refraining from attacking a Red Cross unit. I do not believe that there was any more intention on the part of the enemy to hit a Red Cross than that the British bombers intended attacking the city of Bruges, within the walls of which 200 British bombs fell during the great attacks upon the strategic railway junction that lies just south-east of the city. The bombing of Dr. Melly's camp differs from what was happening during the war in that apparently the bombing of a Red Cross unit was done intentionally and with

malice aforethought. I say "apparently," because the evidence has not, so far as I know, been submitted to an impartial tribunal, and so extraordinary were the accusations made by kindly and reputable Englishmen during the Great War that I am not prepared to accept as proven any illegal enemy action until the evidence has been submitted to such a tribunal.

The case against Italy is, however, fairly black. "The camp was in the centre of a flat plain about three miles in diameter, and beside a brook. No troops or other camp was on the whole plain. On March 11th . . . at 12 o'clock mid-day, I was starting an operation, and heard a plane flying very low over the tent. A large bomb dropped about 150 yards from the tent. I thought the aviator was just being rude. A minute later two bombs fell in the camp square, and then more . . . the plane flew low over the camp about nine times, bombing it." The seriousness of this occurrence depends upon the infectivity of such behaviour. From the accidental bombing of a Red Cross unit close by an ammunition dump to the intentional bombing of one in an open plain is not so great a step as the spread of this latter action from one nation to another. How infectious this behaviour is may be read in the story of gas and of civilian bombing.

Before the Great War of 1914-1918 the use of gas was forbidden by the Geneva Convention. By the end of the war it was in common use by our enemies; whether we used it I do not know. Certainly we are preparing to use it in the event of another war. The absurd steps being taken to persuade an ignorant civilian population that they can be protected thereby is evidence that we intend to use gas ourselves; and if it is argued that it is not direct evidence, then one can answer that no potential enemy will ever believe that argument. The Geneva Convention has been torn to shreds, and it is fairly certain that no similar convention will ever again be attempted.

The practice of bombing of civilians and civilian towns is a more subtle one, as each step in the sequence of thought is so small. With the development of the aeroplane the limitation of range imposed upon the largest gun disappeared. It became possible for the first time to attack civilians. At the same time the use of machinery became so important that it was clearly of as great strategic value to attack the person that made the machine as it was to attack him that used it. The bombing of munition factories followed. It was the logical sequence that these should be attacked. But munition factories were staffed by women as well as by men. It was clearly impossible to distinguish between the sexes. The old chivalrous idea of attacking men and not women was thus superseded. As soon as it became legitimate to kill a woman as well as a man, it was clear that it was good tactics to attack those who attended to the workers in the munition factories as well as the workers themselves, and so the bombing of the civilian population came about, with the destruction of their homes and the risk to the children attendant on it. After the war we of the British Empire stereotyped this destruction of the homes of the enemy by dropping notices to them that we intended to do so. I believe that those, of whatever race it was, that attacked Guernica did the same. The whole world was awaiting the recent attacks of the Japanese some twenty-four hours before they began. The pictures that we are seeing of Chinese with homes destroyed trying to seek shelter in other areas are evidence of the futility of such warnings. Homes cannot be evacuated. In the smallest and wildest village no one can be sure that there is not one brown babe left behind when he starts to bomb it. And so in great cities the destruction of the will to resist of the civilian population becomes the strategic aim. That it will be of any value in ending a war quickly may be doubted, but once an idea gets fixed in the mind of the authorities of the fighting forces it is a hard thing to shift; and we may expect the "logical conclusion" which we now seem to have reached to remain the order of the day for many a war. The interest of the exploits in Abyssinia lie in the fact that they are but a link in the chain that lead to that conclusion.

There is only one thing to be done. To stop it. The world has got to disarm and someone has got to begin. My own belief is that we are the people that should start—and that there is no time like the present. With regard to the first of these points, most people seem to think that we should wait until everyone else is also ready to begin. I do not believe it. The world will never start until it does start; so why should not we? There is no greater danger in it than the constant piling up of armaments; probably less. It is a chance against a certainty. With regard to the second, I have not found anyone to agree with me. Sometime, perhaps, but not now, say some. Absurd, say others. But if they read this book they may be made to think afresh and John Melly will not have died in vain.

T. B. L.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.

Correspondence

"The Future of Speech Therapy"

To the Editor of the GAZETTE

SIR,—As a person who has stammered and as a laryngologist, I would like to assure Dr. Smith that Mr. St. John Rumsey's explanation of the mechanics of stammering and his method of correcting the habit are both very sound.

Dr. Smith quotes a view that is found copied in many textbooks that a stammer arises as a result of "some underlying emotional stress" and will yield to suitable psychological treatment and "to attempt treatment solely by a series of exercises in articulation and correct breathing is to deal with a symptom and not with a cause." This is quite untrue. I will not deny that many stammerers are in need of psychological treatment, but their disturbed condition arises as a *post hoc* rather than a *propter hoc* phenomenon. The constant fear of embarrassment which is the daily lot of the stammerer in many cases will produce serious emotional disturbances.

As regards the L.C.C. clinics, "one of which Dr. Smith has visited," I would certainly associate myself with Mr. Rumsey in their wholesale condemnation. The practice of attempting to deal with stammerers in classes has quite the contrary effect to that innocently put forward by Dr. Smith, and I can assure him that there is nothing quite so disturbing to the stammerer as to be surrounded by his fellow stammerers in the mass.

Dr. Smith concludes by remarking that it is high time that there is more agreement about the ideal method of curing a stammer. With this sentiment I agree fervently, but I cannot refrain from suggesting that it might be well for Dr. Smith to leave the discussion of the matter to those who have practical experience of dealing with it.

Yours, etc.,

DAVID H. CRAIG, F.R.C.S. (Ed.)

3, Ben Madigan Park South,
Antrim Road, Belfast.

To the Editor of the GAZETTE

SIR,—I am grateful to Mr. Rumsey for answering my letter. I regret that I slightly misquoted him in saying that "failure to approximate the vocal cords firmly" is caused by "insufficient cord resistance." They are undoubtedly the same thing; but again I ask for the evidence for this "tonelessness of the cords." I use the word "tone" in its physiological sense, and I am sorry Mr. Rumsey's dictionary did not give the definition of this. The Oxford English Dictionary defines tone in this sense as "The degree of firmness or tension proper to the organs or tissues of the body in a strong and healthy condition."

My questions to Mr. Rumsey were rhetorical, justifying the statement—not my original, but Dr. Cameron's—that "the stammerer can and does speak perfectly." I did not mean this to be taken that every stammerer is a perfect speaker, but that he *can* speak as well in chorus or when by himself as the normal individual. Fortunately, Mr. Rumsey has answered my point when he admits the existence of fear, which was put very much in the background in the original lecture.

Perhaps it is a little presumptuous of me to suggest the medical supervision of Mr. Rumsey's work; but, just as those in charge of the Massage and the Electro-Therapeutic Departments are supervised by doctors, so I think that the work of the Speech Therapist needs medical supervision.

But I do not wish to labour these small points. All I wish to reiterate is that the stammerer's cross is already sufficiently heavy without his having added to it a belief that he has "insufficient vocal cord resistance," when there is no evidence of it.

Yours, etc.,

R. E. SMITH.

3, Horton Crescent,
Rugby.

Sport

Association

GUY'S v. LANCING COLLEGE

GUY'S, paying their first visit to Lancing College, contrary to all expectations gained an easy victory by 5 goals to nil.

The play of school sides is usually characterised by a dashing and thrustful type of football, but Lancing failed to show such form and were very much slower than the Hospital. Right from the kick-off Guy's were continually attacking, and it was soon evident that they had the game well in hand.

However, the Lancing goal remained intact for some twenty minutes, chiefly due to brilliant play by the school goalkeeper, and it was rather ironical that his only mistake of the afternoon gave Guy's their first goal—Dorr, almost from the corner flag, lobbed the ball into the goal-mouth, and the goalkeeper let it spin out of his hands into the net.

A few minutes later, Rees went through on his own and scored the second goal from close range. Play was mostly confined to the school half, occasional breakaways by the Lancing forwards being confidently met by the Hospital defence.

There was no further scoring before half-time, but after the interval Guy's completely over-ran their opponents, who were tiring rapidly. After ten minutes of the second half, Jones, playing a sound game at right half, centred perfectly for Dorr to head in Guy's third goal.

Shortly afterwards, the Hospital scored again, Sprigings placing a low shot well out of reach of the goalkeeper, and towards the end a misunderstanding between the school defence let Dorr through again to add Guy's fifth and final goal.

The result in no way exaggerated the dominance of the Hospital eleven, in fact had the forwards taken more care with their shooting, many more goals would have ensued. Heap, at left back, apparently upset at seeing so many chances wasted, on several occasions ran through the school defence in a vain effort to show the forwards just where to expect the net to be.

Stebbings, in goal, had what will probably prove to be his easiest match of the season.

Team.—H. P. Stebbings; J. A. E. Watts, B. M. Heap; J. E. Jones, G. M. Pearson, H. A. Lee; E. W. Wright, D. W. Drew, G. W. Dorr (captain), G. G. Rees, G. C. Sprigings.

Results of other matches are :—

October 9th.—Old Reptonians. Won 1—0.

October 16th.—St. Catherine's College, Cambridge. Lost 1—2.

October 23rd.—H.A.C. Won 2—1.

October 30th.—Carshalton 1st XI. Lost 4—0.

Hockey

GUY'S v. BANK OF ENGLAND

THIS was the first occasion on which we have played the Bank of England, and, assessing their form from other results, we expected to have a close game. This we certainly got. Following their crushing 10—0 victory over Reading University on the previous Wednesday, the Hospital team went all out, and from the bully-off set up a series of attacks in which Franklin was prominent. These were, however, rather disjointed and came to nothing.

The Bank forward line played well together, and the exchanges during the first twenty minutes were very fast and even, each side doing its share of attacking. The Bank went ahead after fifteen minutes, following a fine individual effort by their centre-forward, and Guy's equalised after twenty minutes through Martin, who followed up a shot by McCallin.

The subsequent play was not of such high quality, because of the extreme torrential rain which lasted the remainder of the match. It says much for the players that in such conditions they did not allow the game to become scrappy. We had slightly the better of the play during the remainder of this half, and led 2—1 at the interval.

The Bank attacked determinedly early in the second half, and the Guy's defence, playing into the heavy rain, which somewhat handicapped vision, had many anxious moments. Both forward lines missed chances of scoring, and McCallin unfortunately had one goal disallowed because of an infringement. The Bank deservedly equalised after twenty minutes, following a misunderstanding in defence. We had the better of the play up to the end, and McCallin scored an excellent winning goal seven minutes from time, shooting hard past the advancing goalkeeper.

It was a great pity that the game was somewhat spoiled by the rain. If all the play had been as good as that in the first twenty minutes it would have been an exceptionally fine match. We trust that next time we play the Bank of England we shall have better conditions, for, enjoyable though the game was, it is impossible to play hockey well in such conditions.

The final score was 3—2 in our favour, Martin (2) and McCallin scoring the goals.

Team.—E. J. A. Needham; J. S. Astbury, T. C. Thorne; E. Smith, A. C. Greene, H. A. Buck; B. M. Cox, D. G. E. Roberts, E. J. Martin, S. G. McCallin, J. B. Franklin (captain).

Other results :—

October 20th.—Reading University (H.). Won, 10—0.

October 23rd.—Bank of England (H.). Won, 3—2.

October 30th.—Old Southendians (H.). Won, 3—1.

Hospital Information, etc.

Pass List

D.C.H.

Gavin Thurston.

CONJOINT BOARD.
FINAL EXAMINATION.
October, 1937.

Pathology.

C. N. Brown	S. J. Hopkins
D. A. G. Brown	F. J. C. Matthews
G. B. Collyer	H. E. Moody
B. Djanogly	C. Phillips
W. Fine	J H. Rake
H. Foster	J. R. E. Richardson
W. F. Frazer	L. F. W. Salmon
G. N. L. Godber	A. E. A. Shaw
A. C. Greene	J. H. Smart
W. S. Hacon	H. Stott
R. J. Healey	E. R. Hodgson-Todd
E. J. F. Hinde	A. J. Walker

Midwifery.

E. I. Davis	S. J. Hopkins
B. Djanogly	D. C. Light
A. M. Edwards	G. J. Parfitt
F. E. Falconer	L. F. W. Salmon
H. Foster	R. W. Stevenson
J. B. Franklin	C. J. Stewart
W. F. Frazer	H. Stott
A. C. Greene	R. A. R. Topping
W. S. Hacon	A. J. Walker
*S. D. Hankey	C. F. Wright
E. J. F. Hinde	

Surgery.

W. E. W. Bridger	L. E. Milton
C. N. Brown	*A. L. Myburgh
L. H. Cooper	*T. H. Steele-Perkins
J. J. Davis	C. Phillips
W. J. Drummond	R. F. Pusey
A. M. Edwards	A. T. M. Roberts
P. G. Epps	H. D. Smith
F. E. Falconer	F. M. Smith
W. Fine	I. G. B. Drybrough Smith
E. S. Foote	W. P. B. Stonehouse
P. F. B. Gillett	*L. P. Symons
A. M. Hutton	A. W. Taylor
M. A. Imray	R. A. R. Topping
A. S. Lee	J. S. F. Watson
D. C. Light	D. J. Wigginton

Medicine.

C. L. Angell	*J. R. Oliver
R. D. Blachford	*J. Patterson
*A. K. Borland	*T. H. Steele-Perkins
*J. D. Buckner	J. H. Rake
*D. I. Evans	*F. J. R. Stoneham
*C. D. Farris	*L. P. Symons
A. W. Gibbons	A. C. R. Wakeman
*S. D. Hankey	C. F. Wright
*A. L. Myburgh	

* Have now completed the examination.

SOCIETY OF APOTHECARIES OF LONDON.
FINAL EXAMINATION.
October 1937.

Surgery.

D. C. Light

Medicine.

*A. W. Box	*W. E. Young
*O. I. Green	

Forensic Medicine.

*A. W. Box	*W. E. Young
*O. I. Green	

* Have now completed the examination.

UNIVERSITY OF CAMBRIDGE
FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.
October, 1937.

PART II.

Physics.

F. W. A. Campbell.

PART II.

Organic Chemistry.

J. S. Pegum.

QUALIFYING EXAMINATION IN ANATOMY.
Michaelmas Term, 1937.

B. P. Griffin G. W. Pinder

Papers by Guy's Men

Sir Arthur Hurst. The time has come. *Lancet* 1937, ii, 949.

—— Observation and experiment and the physiology of the stomach. *B.M.J.*, 1937, ii, 783.

G. B. Dowling. Dermatological aspect of affections of the eye. *B.M.J.*, 1937, ii, 794.

T. B. Johnston. The movements of the shoulder-joint. *Brit. Jour. Surg.*, 1937, xxv, 252.

Min Sein. Recurrent swelling of the parotid glands with the report of a case (1937). *Indian Med. Gaz.*, 1937, lxxii, 526.

—— A note on a cheap substitute for a shadowless lamp for operation theatres (1937). *Ibid.*, 545.

—— Treatment of obstinate œdema by multiple punctures. *B.M.J.*, 1937, ii, 852.

G. B. Dowling. The early diagnosis and treatment of tuberculosis of the skin. *Practitioner*, 1937, cxxxix, 551.

W. Sampson Handley. Pre- and post-operative irradiation in malignant disease. *Clin. Jour.*, 1937, lxvi, 449.

W. H. Grace. The pathological aspects of criminal abortion. *Liverpool Med. Chir. Jour.*, 1937, xlv, 136.

Changes of Address

E. E. D. Gray, M.D., M.R.C.P., 143, Croydon Road, Anerley, S.E.20. *Sydenham* 8427.

C. Frank Cosin, M.D.(Lond.), B.S., M.R.C.P., 2, Langland Gardens, Hampstead, N.W.3, and 35, Devonshire Place, Wimpole Street, W.1. *Hampstead* 4416-7.

The Services

Major H. V. Leigh, M.D. (late R.A.M.C.), to be Lt.-Col. and to command the 3rd (Western) General Hospital, October 1st, 1937.

Eds. { H.B.O.C. / C.H.E.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *20th November* 1937 — *Number* 1287

PASSIM

THE "Niggers," probably unknown to many, are a concert party formed of Residents whose task it is to rehearse an entertainment from now until Christmas, which culminates in a performance in every ward of the Hospital on Christmas Day. The rehearsals take up many evenings and demand much of the Residents' time. The entertainment itself lasts the whole day, and it is only by frequent recourse to alcohol that the actors are able to perform for so many hours in a role to which they are unaccustomed. The tradition of this party has by many consecutive years of service become well-nigh unbreakable. Although many in the past have had grave doubts as to the desirability of its continuance, they have not had the courage or support to assert themselves.

Whether the "Niggers" are a good or bad institution, whether this tradition is an honourable one or no are questions to be answered once again by those who sit in judgment. That they necessitate a great deal of hard work for the actors is denied by no one; that this work is justified by results on Christmas Day is denied by many. Personal inconvenience to the Residents is no just argument against the "Niggers," for were they to bring happiness to the patients the time and trouble spent would not be grudged. In nearly every ward in the Hospital, however, there are an unfortunate few who are in no position to be entertained, and whose relatives cannot be expected to view the uproar with any sense of satisfaction. Whether the remainder are entertained we do not know, but it would seem doubtful that an often discordant, and nearly always incomprehensible, succession of musical parodies could achieve this end. Even on Christmas Day we will agree that it is our duty to heal and comfort wherever possible. We wonder, then, whether we are justified in disregarding the suffering minority in a doubtful attempt to give others enjoyment.

IT is now some months since we learnt of the existence of the new Association of Nurses, and were emboldened to express the opinion at that time that some such body might, if wisely organised, serve a useful purpose in further promoting the interests of the nursing profession. That our point of view was not favourably received by all will have been evident to our readers from the correspondence we published. We do not, however, regret our incursion into the subject, as we believe that even if our attitude was a mistaken one, and this we do not admit, it served to awaken interest and discussion on what must be considered a most important subject. A month ago the discussion seemed to have died down, although the rather thorny problem was not in our view much nearer solution.

To those of our readers who feel no inclination to see the matter reopened we would here offer a timely warning that they may not waste their time in reading further.

Several items of news have reached us which have served to reawaken our interest in the subject. Firstly, the institution of a Parliamentary Commission, a member of which is a Guy's man (Sir Francis Fremantle, M.P.), has confirmed our contention that this is a national problem to be tackled nationally. Secondly, we are now in possession of further facts regarding the new Association of Nurses, which facts have enabled us to reassess our attitude to it and, thirdly, the matter brought up by Miss Cussens in her letter does, we feel, call for some comment on our part.

We have made inquiries regarding the constitution and affiliations of the Association of Nurses, and have been astonished to find that, although this body had been quite successful in attracting new members, it has not yet in fact any constitution. Although the Kingdom of Great Britain has managed to subsist no short time without a constitution, we have never yet heard of a society or association doing so; indeed, it must prove

quite a considerable handicap to its members, for they cannot know what its precise objects may be or where its powers may begin and end. Nevertheless, the aims of the Nursing Association are laid down in general terms on the membership card, a specimen copy of which we have on loan, and these aims are entitled, "The Nurses' Charter." This Charter, we have been given to understand, is the identical one which was adopted earlier in the year by the Trades Union Council when it started to interest itself in the affairs of nurses, and in general terms its various objects would seem to be modest and entirely praiseworthy. We reproduce its terms for your perusal :—

1. A 96-hour fortnight with elimination of spreadover.
2. Payment for overtime.
3. At least one month's annual leave with full pay.
4. Full pay during sickness.
5. Adequate compensation for disability resulting from service.
6. Proper facilities for study, recreation, comfort and privacy in Nurses' Homes. Trained nurses to be allowed to live out.
7. Statutory superannuation rights, transferable with change of job.
8. Abolition of unnecessary restrictions.
9. Nurses to sit on a joint council in each hospital, to consider organisation of work and service conditions. National and regional joint councils to determine minimum standards for the profession.
10. Better preliminary training. Free training for higher posts.

The first item, although admirable in its objects, is not one which is acceptable to most Hospital authorities, for it would entail the introduction of three working shifts of eight hours each day, an arrangement which necessitates the patient being nursed by three different sets of nurses during the twenty-four hours. We agree with the Hospital authorities that this is not in the best interests of the patient. With regard to the second item it would seem to us a small matter. It must be an exceptionally rare occurrence for a nurse in a hospital to be called upon to work overtime, and, although this clause is frankly distasteful to us, savouring as it does of the factory atmosphere, it is, we repeat, a minor question. The remaining items of the Charter are in their general aims reasonable enough, and, we are pleased to note, have already, in the case of an up-to-date hospital like our own, been largely anticipated.

It will perhaps have struck our readers as curious that the Association should have taken for its Charter that laid down by the Trades Union Council, and we hastened to find out what relationship existed between the two organisations. The Nursing Association, we discovered, is not at present affiliated with the Council, but hopes soon to be.

Rightly or wrongly we associate in our minds the idea of a trade union with the action of striking to obtain ends, and we sought an answer to the question as to whether the Association had a provision for the use of this weapon in the eventuality of its demands being refused. We were assured that no such provision existed, and that it was not intended in any circumstances to use such a weapon, even if the eventuality arose.

"The Association," quoting again from the membership card, "hopes to achieve the position in the nursing world that the British Medical Association has won among doctors," and this position is to be achieved, we have been informed, by strictly non-political methods. If we could accept these assurances *in toto*, our sentiments regarding the Association would remain what they were when we wrote with less precise data than we now possess and when we welcomed any effort to found a vigorous general association of nurses which would advance their interests by judicious propaganda and persuasive methods.

At that time of writing we had no knowledge of the affiliation which the Nursing Association intended contracting with the Trades Union Council, and we now fear that this step will make the Association into a semi-political body, which is the last thing any friend of the nurses would desire.

That the Trades Union Council is not, strictly speaking, a political machine may be true in theory, but in fact there is not the slightest doubt that it is as politically minded as any organisation could be, and while it is not our business to approve or decry its activities, we cannot avoid the conclusion that any society affiliated with it automatically possesses a political character, and must owe allegiance to it. Now we feel this allegiance will completely destroy the very character of any organisation the type of which we wished to recommend, for it will inevitably result in introducing a sectionalism into the profession.

It will also mean that the nurses will find themselves with a new set of masters who may not prove to be as solicitous for their individual welfare as are their present ones. The Trade Union can prove a very hard taskmaster, and an association of hundreds of trade unions is, we hazard, about as inhuman an overlord as it is possible to find. We view the future of the Nurses' Association with considerable mistrust if this affiliation should indeed take place, and we would suggest that any nurse who considers

joining it should ask for a copy of the articles and constitution of the Association, so that she may know wherein she is committed. In any case it strikes us as the most extraordinary folly to join any society without knowing its entire scope.

The points raised by Miss Cussens in her letter which we print in this issue raise quite a different question, and one upon which it is difficult for us to comment, since it concerns the inner workings and discipline of the Nurses' Home. The point of Miss Cussens' argument seems to be that whereas the College of Nursing and its affiliated body, the Student Nurses' Union, are allowed to hold meetings in the precincts of the Home, the Nurses' Association has been refused this permission, and her contention is that this is an unfair discrimination against her oganisation, which she claims is similar in its aims to the College. We do not assume to know the motives of the step taken by the House Committee, but we believe it true to say that the refusal was based upon the assumption, denied by Miss Cussens, that her organisation is of a semi-political character, and that it was not felt wise to introduce political controversy into the Nurses' Home. We are given to understand that no exception would be taken to meetings being held outside the Hospital premises, and that it was even suggested that a certain hall near to the Hospital would prove a convenient meeting place.

Upon the general issue of the right of free speech in a limited community we do not propose to comment, but we may perhaps be allowed to express the opinion that the holding of meetings outside the Hospital grounds must inevitably lead to a more serious rift in the nurses' ranks than would be the case if the meetings were held within, and it is precisely this rift which it is desired to avoid. We cannot look forward with equanimity to the spectacle of a large body of nurses meeting outside the Hospital to discuss its affairs and perhaps—who knows ?—being harangued by trade union delegates, who have no knowledge of the Hospital conditions or sympathy with its valuable traditions.

AT the moment of going to press we have received the following letter signed by Messrs. E. S. Nicholson, R. C. S. Dick, H. H. Crabb and I. G. Robin, and we include it here because of its great topical interest :—

" The question of the future of Guy's Rugger is one which needs attention—urgent attention—if the Club is not to sink into oblivion. This letter is not one excusing the failures in recent matches ; its purpose is to examine the factors which have led to the gradual decline over the last few years, and to endeavour to stimulate some constructive criticism, and, more important still, concrete and enthusiastic help. The situation of the 1st XV is naturally the one which gives most concern ; but, in spite of good match results in some of the junior teams, the general standard is low. Some of the main reasons why the 1st XV is not winning matches now are the following : (1) The high standard of the fixture list, handed down from the days when Guy's was the best team in London, and which it is our duty to keep. (2) The lack of ready-made first-class players coming to Guy's. (3) The difficulty of training inexperienced but promising players, partly owing to the exigencies of work at the Hospital, and partly to the lack of a system of coaching. (4) The general lack of enthusiasm, engendered by a long series of defeats. What is the solution of this problem ? Since Guy's no longer attracts the first-class player, we must strive by keener training and better coaching to produce first-class players from the men we already have. There are many obstacle in the way, but with the enthusiastic co-operation of Guy's men, past and present, Staff and student, these must be surmounted. More players will be wanted ; coaches will be needed to watch games and give criticism and encouragement. The responsibility has been left too long to a small group of players, and the time has come for a reorganisation, and a more concerted effort amongst all players, with the backing of those interested in Guy's rugger. Only then, with our present list of opponents, will we be able to open our Sunday papers with less trepidation."

Obituary

ROBERT WILLIAM MORRELL

THE sudden death from heart failure recently at Burton-on-Trent cut short the career, at the age of 50, of a dental surgeon who was not only prominent in the technical branches of his profession, but was esteemed by all who came into contact with him for his devotion to his work and his sympathetic interest in his patients.

Robert William Morrell was the third of four brothers to qualify in Dental Surgery from Guy's, where he was a very able and popular student and played for the Hospital hockey team. He took his L.D.S. R.C.S. in 1908, and went to Burton-on-Trent, where he spent the rest of his life building up a large practice and making for himself a wide circle of friends. His loss will be deeply felt by many for his simple and kindly manner endeared him to all.

F. F. BURGHARD.

Alcoholic Gastritis, 1833 and 1937

Part of a contribution to a *Festschrift* in honour of Dr. Joseph Pratt of Harvard

By Sir Arthur Hurst

William Beaumont's Observations on Alcoholic Gastritis, 1833

In his famous "Experiments and Observations on the Gastric Juice" published in Plattsburgh in 1833 William Beaumont made some interesting observations on the effect of alcohol on the stomach. Alexis St. Martin, who had developed a gastric fistula as the result of being accidentally wounded by the discharge of a musket on June 6th, 1822, and was under Beaumont's observations with intervals from 1825 to 1833, frequently indulged in bouts of drinking. The following extracts from Beaumont's book record his observations on the appearance and functions of the gastric mucosa on one such occasion.

July 28th, 1833.—"St. Martin has been drinking ardent spirits pretty freely for eight or ten days—says he feels well and has a good appetite. . . . Stomach not healthy—some erythema and aphthous patches on the mucous surface."

August 1st.—"Considerable erythema and some aphthous patches on the exposed surface—secretion vitiated—extracted about half an ounce of gastric juice—not clear as in health—quite viscid."

August 2nd.—"Gastric fluids consist of unusual proportion of viscid mucus, saliva and some bile, tinged slightly with blood, appearing to exude from the surface of the erythema and aphthous patches. . . . St. Martin complains of no sense of pain, symptoms of indisposition or even of impaired appetite."

August 3rd.—"Inner membrane of stomach unusually morbid—the erythematous appearance more extensive, and spots more livid than usual; from the surface of which exuded small drops of grumous blood—the aphthous patches larger and more numerous—the mucous covering, thicker than common, and the gastric secretions much more vitiated. The gastric fluids extracted this morning were mixed with a large proportion of thick ropy mucus, and considerable muco-purulent matter, slightly tinged with blood, resembling the discharge from the bowels in some cases of chronic dysentery. . . . St. Martin complains of no symptoms, indicating any general derangement of the system, except an uneasy sensation, and a tenderness at the pit of the stomach, and some vertigo, with dimness and yellowness of vision on stooping down and rising again, has a thin, yellowish-brown coat on his tongue, and his countenance is rather sallow—pulse, uniform and regular; appetite good."

August 4th.—"Extracted about an ounce of gastric fluids, consisting of ropy mucus, some bile and less of the muco-purulent matter than yesterday; flavour peculiarly fœtid and disagreeable; alkalescent and insipid; no perceptible acid."

August 5th.—"Coats less morbid than yesterday; aphthous patches, mostly disappeared; mucous surface more uniform, soft and nearly of the natural, healthy colour; secretions less vitiated. Extracted two ounces gastric juice, more clear and pure than that taken for four or five days last past, and slightly acid; but containing a larger proportion of mucus, and more opaque than usual, in a healthy condition."

August 6th.—"Stomach empty; coats clean and healthy as usual; secretions less vitiated. Extracted two ounces gastric juice, of more natural and healthy appearance, with the usual gastric acid flavour; complains of no uneasy sensation, or the slightest symptom of indisposition; says he feels perfectly well, and has a voracious appetite; but not permitted to indulge it to satiety. He has been restricted from full, and confined to low, diet and simple, diluent drinks, for the last few days, and has not been allowed to taste of any stimulating liquors, or to indulge in excesses of any kind."

Beaumont concludes with the observation that "it is interesting to observe to what extent the stomach may become diseased without manifesting any external symptoms of such disease," and that "vitiated secretion may take place and continue for some time without affecting the health in any sensible degree."

Observations on a Case of Alcoholic Gastritis, 1937

A man, aged 47, was admitted on May 1st, 1937, with a history that for many years he had drunk on an average a couple of cocktails before lunch and again before dinner, beer or whiskey with lunch and dinner, whiskey at tea time, and port after dinner, followed by an unspecified number of whiskies. He generally finished the evening by being drunk. He smoked about forty cigarettes a day. For the last few months he had felt "run-down" and got easily tired. His appetite

was poor and he could eat no breakfast. He was occasionally troubled with nausea and retching on waking, but beyond this he had no indigestion. He was engaged in important business concerns, but his memory had recently become impaired and he felt so confused that he had become increasingly inefficient during the last few months.

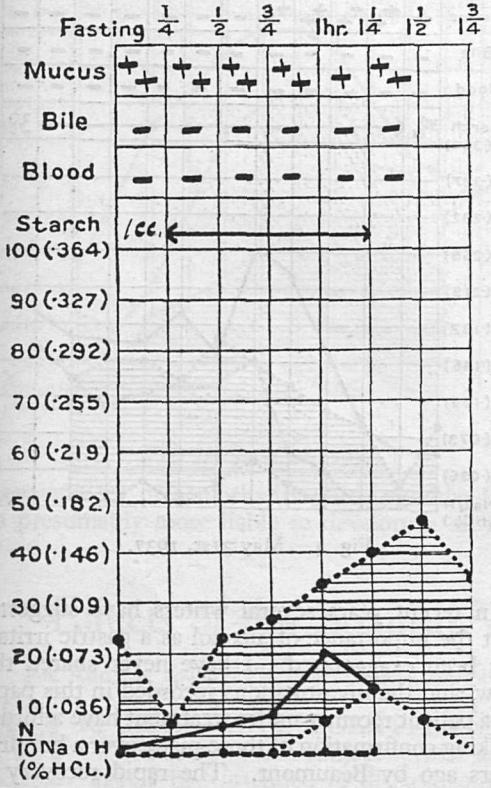


Fig. 1 May 5th, 1937.

Nothing abnormal was found on physical examination. A test-meal given on May 5th showed that he had complete achlorhydria with considerable excess of mucus in all the fractions (Fig. 1). Although his liver was not palpable, the lævulose test showed that there was a considerable degree of hepatic insufficiency (Table I).

He was kept in bed on a milk diet and his stomach was washed out every morning with dilute hydrogen peroxide (1 drachm to the pint) till the washings were clear. A second test-meal given five days later showed a quite unexpected improvement, a rising curve of acidity being obtained, with mucus in the resting juice and first quarter-hour fraction only (Fig. 2). He was

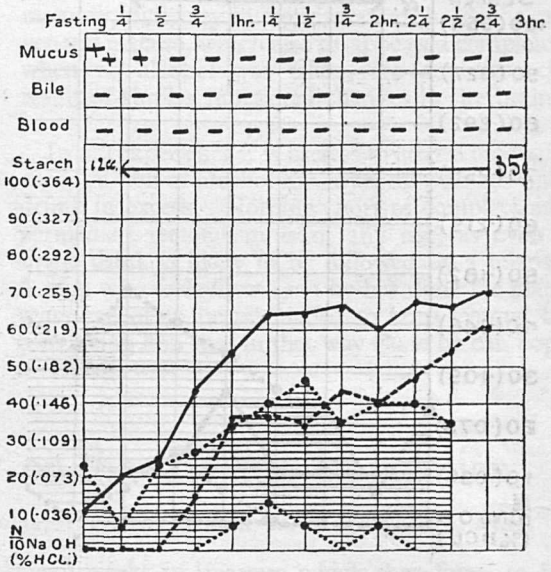


Fig. 2. May 10th, 1937

feeling very much better and left the Clinic the following day in order to take part in the Coronation festivities. Although he was advised to refrain from alcohol, it was hardly expected that

TABLE I.

Blood sugar in mgrs. per 100 c.c. : I. Fasting ; II. One hour after taking 50 grms. of lævulose ; III. Two hours after.

	4th May, 1937.		*28th May*, 1937.		Maximum normal rise.
		Rise above fasting level.		Rise above fasting level.	
I	103	—	117	—	—
II	154	51	125	12	20
III	118	15	95	—22	5
Total rise		66		—10	25

he would do so, and when he returned on May 19th he was feeling very unfit again, and admitted that he had celebrated the occasion in his usual manner. A test-meal showed a return to complete achlorhydria with much excess of mucus in every fraction

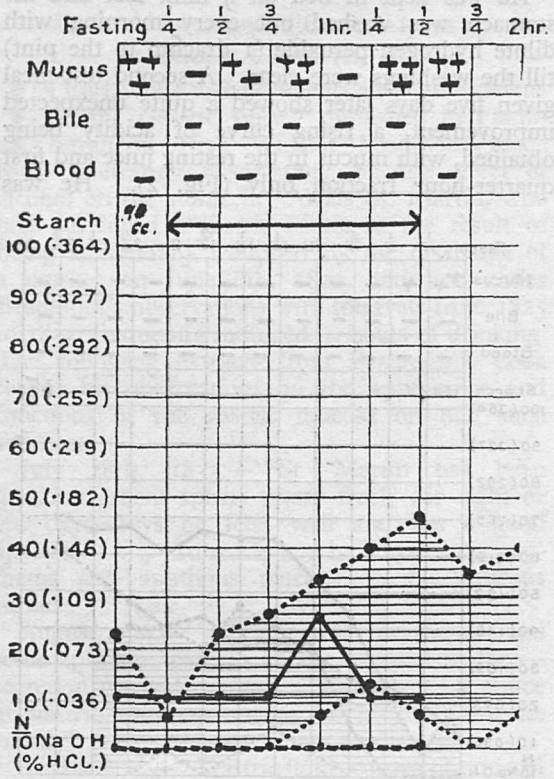


Fig. 3. May 19th, 1937.

(Fig. 3). He was put on the same regime as before and quickly lost his general and abdominal symptoms. On the 31st a test-meal showed that the acid had returned again (Fig. 4), but there was still a good deal of mucus in the first five specimens. The treatment was therefore continued, and on June 9th a final test-meal gave a hyperchlorhydric curve with no trace of mucus (Fig. 5). Presumably he has constitutional hyperchlorhydria, which has for years been masked by alcoholic gastritis. The lævulose test on May 28th showed a complete return to normal (Table I). He left the Clinic on June 9th fully determined to remain permanently teetotal in view of the enormous improvement in his health. For the first time for many years he felt really fit.

COMMENTARY

Beaumont's observations on Alexis St. Martin showed how alcoholic excess could give rise to acute gastritis, in which the mucous membrane of the stomach showed obvious signs of inflammation and the normal acid secretion was replaced by tenacious and sometimes blood-stained mucus. Rapid and complete recovery followed abstention from alcohol.

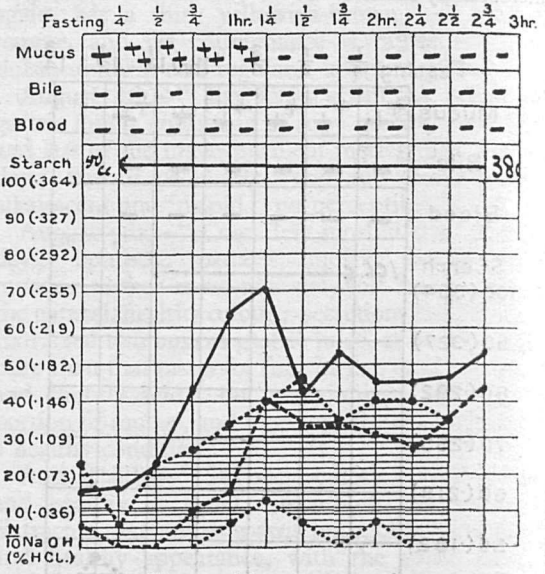


Fig. 4. May 31st, 1937.

In recent years several writers have suggested that the importance of alcohol as a gastric irritant has been exaggerated. I have never shared this view, and the investigations recorded in this paper on a patient recently under treatment have afforded striking confirmation of those made over a hundred years ago by Beaumont. The rapid recovery of normal gastric secretion was quite unexpected, as this was not a case of a sober man who occasionally had bouts of acute alcoholism like Alexis St. Martin, but of a man who had habitually drunk in excess. It was natural to expect that the long-continued irritation of the stomach by alcohol would have led to irreparable damage to the mucous membrane, the primary achlorhydria resulting from impairment in the functional activity of the secretory cells being followed by their degeneration and final atrophy. Instead of this the functional efficiency of the mucous membrane returned to normal with extraordinary rapidity when no alcohol was taken, a milk diet was given and the stomach was washed out each morning. The hyperchlorhydria which was revealed after complete recovery was probably constitutional and had existed before the gastritis resulting from over-indulgence in alcohol had masked its presence. The dilution of alcohol by

an abundant secretion of gastric juice is not, therefore, necessarily a protection against the development of achlorhydria, although the latter is presumably more liable to develop in an individual with constitutional hypochlorhydria than in one with constitutional hyperchlorhydria.

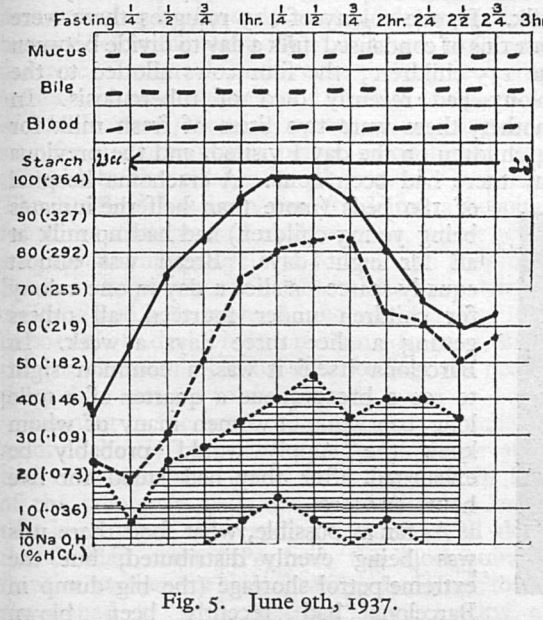


Fig. 5. June 9th, 1937.

It is interesting to note that the lævulose test showed a similar rapid and complete recovery of hepatic function, indicating that a functional hepatic insufficiency may be present for a long period before any actual necrosis of liver cells occurs in the first stage of the development of cirrhosis of the liver. In a paper "On being Liverish," written for Dr. Libman's *Festschrift* in 1932, I gave other examples of this functional alcoholic "hepatosis."

The nervous symptoms—irritability, loss of memory, difficulty in concentration, headache and general malaise, which also disappeared completely when no alcohol was taken, are doubtless the result of similar functional changes in the brain.

In my experience it is useless to advise moderate consumption of alcohol for anybody who has once drunk in excess. Nothing short of complete and permanent teetotalism is of any use, as even a single drink is likely to be followed by a relapse. A man who feels fitter than he has done for many years can often be persuaded to keep teetotal by convincing him that in that way alone he can hope to remain well.

Effects of the Spanish War on the Civilian Population

An Address to the Physical Society on 8th October, 1937, by Richard W. B. Ellis, Esq., M.D.

MR. CHAIRMAN and GENTLEMEN,—When I chose this subject several weeks ago, I had intended to discuss some of the wider issues raised by civil war in perpetuating and intensifying political schism, and to consider some of the possible results of distributing refugees from the same province, or even the same family, amongst countries as far apart as Mexico, England, Belgium, France and Russia. I had been particularly interested in the Basque children now in this country, and just as I had been amazed by their normality and lack of *angst* in Bilbao, where they were living under conditions of daily bombardment and semi-starvation, I had been impressed not by the few isolated examples of unruliness which have been the subject of so much press comment, but by the real emotional stability of the group as a whole. The younger children almost immediately transmuted the terrors of aerial bombardment into play-material, whilst the great majority adapted themselves happily and with apparently little effort to conditions of life in a foreign country. It was naturally amongst the few who were for many weeks in quarters which they knew to be temporary, or who were moved several times to different colonies, or who were separated from their brothers and sisters, that a certain restlessness became apparent.

Having, however, just returned from an investigation of the refugee situation in Catalonia, I now feel more inclined to speak about conditions as they exist in Eastern Spain at the present time. There have been three main waves of refugee immigration into the one small province of Catalonia, which is now directly supporting nearly a million refugees in addition to its normal population. They have come from the south, following the flights from Malaga and Almeria, from Madrid, and now more recently from France and from the northern provinces by way of France. To get some idea of the havoc and distress this wholesale mixing of populations involves, one must realise that the Catalans and Basques are both healthy and progressive peoples, whereas those from the south are used to a very low standard of living and are heavily infected with tuberculosis and

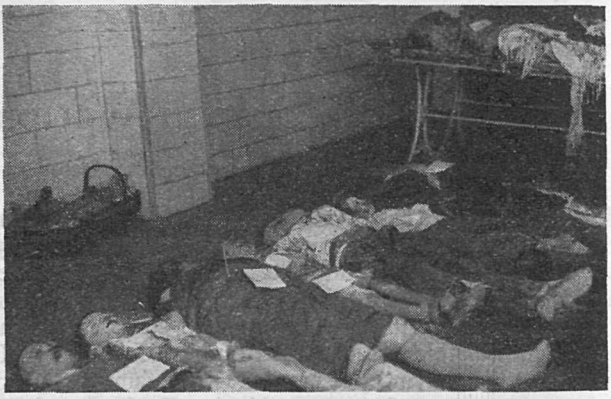
trachoma. Most of the southern refugees are verminous; many have never slept in beds, and some have even been cave-dwellers. The journey for nearly all has been a very hard one, and there have been few who could bring more than the cotton clothes they stood up in. Those from Malaga were eight days or more on the road, under constant fire or bombardment. One woman continually holding a four-year-old child, told us she had stooped down over her dead husband, to find her three older children had run on ahead. She had never seen or heard of any of them since. Many of the refugees from the north had fled from San Sebastian to Bilbao, from Bilbao to Santander, from Santander to Gijon, from Gijon by boat to France, and from France had arrived in Catalonia at Puigcerda.

Bombardment of Barceloneta, 1st October, 1937.

Unfortunately the flood of northern refugees had been so sudden and so great—eleven thousand had passed through the little frontier village of Puigcerda in the six days before I was there—that it had been utterly impossible to separate them from the southerners who were already settled throughout the province. In the remoter villages we found Basques and Madrilenos living in the same houses, and even the same rooms, as southerners with trachoma and phthisis. The degree of deprivation and distress was in many colonies appalling. With no soap (one house had been without for over two months) and practically no fuel for heating water, any standard of cleanliness was impossible; in some colonies scabies had become almost universal, with many cases secondarily infected. Often the buildings in which the refugees were lodged were derelict, and neither wind nor rain proof. Blankets, bedding, shoes and clothes were getting scarcer as more and more refugees kept arriving.

The most desperate necessity, however, was milk. In one colony of 225 refugees there were four tins of condensed milk a day to divide between the 135 children; the four cows allotted to the colony had recently died of tuberculosis. In another, there were two litres of fresh milk for 74 children on the day I visited, and the previous day there had been none. A trachoma hospital of 180 beds (more than half the inmates being young children) had had no milk at all for eight days. Bread was almost equally scarce—a slice a day in one colony for children under fourteen, all others getting a slice three days a week. In Barcelona itself it was a common sight to see a bread queue a quarter of a mile long, consisting of women many of whom knew the supply would probably be exhausted after they had stood for five hours or more.

As far as possible, what food there was was being evenly distributed, but the extreme petrol shortage (the big dump in Barcelona had recently been blown up, and a tanker sunk between Barcelona and Valencia) made regular delivery to the remoter villages almost impossible. The way in which the native Catalans were dividing their own starvation rations with the refugees was a sacrifice that had to be seen to be believed.



The effect of war on a civil population.

Following the northern refugees through from the French frontier, I saw two thousand, nearly all women and young children, arrive at Puigcerda at a few hours' notice; many had left their homes weeks or months before. They immediately started washing their children or what few clothes they had in a stream beside the station yard, or

lining up to wait four or five hours for the one plateful of beans or rice which the village could provide. They slept the night in the cinema, and next morning began to be sent off down the line, but not before the next day's quota was beginning to arrive. In Barcelona there are six large receiving stations for the refugees, one (with a complement of 700 blankets) housing 2,000. Here they may stay for a night or two before being finally distributed to the villages in all parts of Catalonia. The Stadium has been converted into a hospital for minor ailments and medical cases, whilst acute surgical conditions are sent to the civil hospitals. Some attempt is made in Barcelona to vaccinate children and give typhoid innoculations, but it is impossible to deal with more than a fraction, since the problems of housing and feeding are taxing the public services to the utmost.

Turning to the question of the aerial bombardment of the civil population in Spain, the devastation of which has almost been forgotten in face of the wholesale slaughter in China, one learnt that is a matter of every-day occurrence all along the Catalan coast. Portbou, the most suitable frontier station for immigration, had had to be abandoned as such, because large groups of refugees were invariably bombed as soon as they arrived. On our third day in Barcelona (October 1st), fourteen planes carried out a heavy bombardment of Barceloneta, the fishermen's quarter. An infant school was hit; there were over a hundred dead, more than half of them young children. We went down to the Hospital Clinico in the evening, and saw where over forty bodies recognisable as such had been laid out. More than twice as many wounded, most of them children, were in the wards. One thing seemed clear; it is futile for countries not at war to issue protests against this whilst building planes for the same purpose. If there is war at all it is unquestionable that this is the way it is, and will increasingly be, waged.

In conclusion, I can only say there is another side to the picture. The National Joint Committee (Treasurer, Viscount Cecil of Chelwood, K.C., P.C., The National Joint Committee for Spanish Relief, 53, Marsham Street, S.W.1), the Society of Friends, and other organisations are doing all they can with limited funds to provide milk canteens and other necessities, and to establish colonies for child refugees. But there is a desperate need for contributions both in money and in kind (tinned milk, clean clothes and blankets, and shoes). The winter promises the most appalling suffering and epidemics, which will certainly not be confined to Spain, unless help can be immediately provided.

Some Notes on Chloroform

By an Army Surgeon—1849

OF chloroform much has been written; in its use much has been done. Some surgeons tell us they cannot operate without it; others declare it *never* does *harm*; many imagine it really does *good*; some look upon it as the most merciful gift of Providence; many swear by it; the natives of India bow down to it, and worship it as a god; some properly consider it (amongst many others) a useful remedy. But the practical surgeon views it in the hands of the *military* medical officer as a highly pernicious agent, which unquestionably *it is*.

We have used it ourselves largely, in cases we need not name; and we shall probably now and then administer it to the end of our career; but in time of war, on the field of battle, on the bloody plain, or in the field hospital, it should *not* be found. No place should be assigned it. Leave it with the medical storekeeper; place it on a high shelf in his warehouse, and, if it be hot, remove the stopper from the bottle to keep it cool.

We could with ease adduce fourscore cases to prove that chloroform is injurious in field practice, but one example shall suffice.* That it renders the poor patient unconscious of pain cannot be doubted. But what of that? What is pain? It is one of the most powerful, one of the most salutary *stimulants known*. It often brings about reaction of the most *natural kind*, when many approved measures fail. Do we not know this to be the case? Have we not reason to remember (being compelled to operate during collapse†) that

* I had established a large hospital in the city of Mooltan, for the reception of the enemy's wounded. One morning, in going round, I noticed a man whose stump was being dressed, and was informed that a friend, who was in the habit of coming to my assistance, had amputated his thigh the evening before. I pointed out how well the operation had been performed, but added, feeling the patient's pulse, that he would not recover. Soon after, I met my friend, and said, "I have seen your handiwork up there, and a better or cleaner stump I have not often noticed. You will not, however, save your man." "Indeed! Why, he is a fine strong fellow." "Ah, but he looks as if he had taken *chloroform*." "Chloroform! we gave it him before the operation, and he did not suffer the slightest pain." "Did you? Then your patient's hours are numbered." He died before the evening.

† If hæmorrhage cannot be restrained by pressure, amputation must be instantly performed, as in comminuted fracture near the shoulder or hip-joint.

reaction began to appear with the application of the knife, and was fairly brought about before it was laid aside?

In desperate wounds of the extremities, where you are obliged to affix the tourniquet in order to prolong life, and to give time for the administration of stimuli, in order to render the poor sufferer able to bear necessary amputation—will any thinking man again give chloroform? (We say again, for it has been too often given in similar cases.) We think—we hope not. Common sense will surely teach us better, and, notwithstanding the many plausible reasons in favour of chloroform, prevent us from committing an error which has hastened many a fellow-being to the grave.

Correspondence

Nurses and Union

To the Editor of the GAZETTE

SIR,—There has been some discussion in your columns during the past months about nurses' conditions, etc. In a hospital paper we feel that such discussion alone serves no useful purpose; readers should already be conversant with nurses' work, conditions of living and salaries. What *is* necessary, and this is what most of your correspondents seem to have neglected, is whether nurses should be organised, and, if so, what form that organisation should take.

In Guy's until November 1st the working week consisted of 61 hours. In other large hospitals in London nurses are working 70 hours per week and more. This is surely convincing that organisation *is* necessary, if only for the protection of the patients. To those who still doubt this, Lord Baldwin has given the answer: "What is the alternative to collective bargaining? There is none except anarchy."

In Guy's there is a large group of the nursing staff who are members of the Association of Nurses, formed by nurses who had these considerations in mind. This group has been formally denied the right to meet in the Nurses' Home. At the same time the Student Nurses' Group of the College of Nursing is allowed to hold their meetings, and invited a representative from the Central Body for the purpose of recruitment. This representative was given hospitality for the night, to enable her to speak to night and day nurses.

Matron, and the House Committee, on our approach suggested to us that we might meet outside the Hospital, and are willing to arrange nurses' off-duty so that they can attend our meeting.

It is hard to see why one group working in the Hospital should be given privileges that are denied to another. It is still harder that nurses should be denied those elementary rights which are available to every free citizen of this country.

This all makes the title, "Nurses' Home," seem to be a mere euphemism.

Yours, etc.,

MARGARET CUSSENS,
Secretary.

Nurses' Home,
Guy's Hospital, S.E.1.

The Future of Speech Therapy

To the Editor of the GAZETTE

SIR,—I must thank Dr. Smith for explaining his use of the word "tone." Having used this word in its meaning of sound eighteen times in the first eight paragraphs of my article, and Dr. Smith having written in answer to me, I naturally thought he was using it in the same sense.

When a violin is tuned the rising or falling pitch is evidence that the tension of the string is being increased or decreased. Similarly with the voice, evidence of increase or decrease of tension of the vocal cords is provided by the rise or fall in the pitch of the voice; we do not ask for evidence, we have had it. Similarly, the quality of the vocal tone provides evidence of the correct or incorrect approximation of the vocal cords; having heard the evidence we do not ask for it.

Dr. Smith again quotes the statement that "the stammerer can and does speak perfectly." A layman would wisely accept a doctor's statement as to the perfection of the health of an individual, so I suggest that the trained and experienced vocal expert is the best judge of what constitutes perfect speech.

Although Dr. Smith has been assured that my patients are sent to me by doctors, he still urges closer medical supervision. Personally I welcome the co-operation of the doctor in my work just as many of the doctors welcome the co-operation of the voice producer, because stammering is an intermittent breakdown in voice control. Anyone

who listens carefully to a stammerer will have ample evidence of this.

Yours, etc.,

H. ST. JOHN RUMSEY, M.A.

153, Clarence Gate Gardens, N.W.1.

[This correspondence is now closed.—*Ed.*]

The Oxford Group

To the Editor of the GAZETTE

SIR,—Allow me briefly to add to your allusion to the Oxford Group in a recent issue of the *Gazette*. A journalist has said of it :—

" It's not an institution,
It's not a point of view ;
It starts a revolution
By starting one in you."

Yours, etc.,

JOHN TUCKER.

Guy's Hospital, S.E.1.

[Not in us.—*Ed.*]

Rugby

To the Editor of the GAZETTE

SIR,—We feel compelled to write by the almost uninterrupted series of monotonously regular and exceptionally heavy defeats with which the Hospital Rugby XV is meeting. Last season the record was bad, the previous year poor, this year—*chronic* !

This state of affairs is particularly galling to Guy's supporters, as we consider the team representing the Hospital is not genuinely a full-strength side. That there is abundant talent we have no doubt, unless, as quoted by " Passim " in the issue of 23rd October, 1937, " Guy's scratch forwards are engaged by Bertram Mills," our complaint is that it is not properly exploited.

There are men languishing in junior teams who are deserving of promotion, but who are neither watched nor encouraged.

What has happened to the proposed scheme of sending scouts to watch junior matches ? At present we are convinced that of all the junior teams playing during the week not more than one of them has an appointed scout watching. It is as well to add that several members of the Hospital play for clubs outside who are in a class above the Hospital XV.

May we ask how the teams are selected ? Considering the number of available players, in fairness to all it would seem advisable to appoint a selection committee of a definite number with preferably one or two non-playing members on it. Is it not possible, in an attempt to bring about an improvement, to have a hard trial immediately ?

We hope that officials will accept the following criticisms of the First XV in the right spirit, as we have the interest of the Club much at heart :—

1. Men are being played in unaccustomed positions and thereby being wasted.
2. Forwards do not back up or play as a " pack."
3. Backs do not run straight.
4. Standard of passing is extremely poor.
5. Tackling reminds us of a troupe of ballet dancers.
6. Particularly there appears an obvious lack of enthusiasm and team spirit.

Could not the team practise and train as a team under perhaps the watchful eye of an experienced coach ?

In conclusion let us hope that the difficulties of the team will soon be remedied and that the Hospital Cup will return and remain in its permanent and only home—*Guy's*.

Yours, etc.,

SPECTEMUR AGENDA.

Guy's Hospital, S.E.1.

Debating Society

A MEETING of the above Society took place on October 12th to discuss the following motion : " That, in the opinion of this House, Divorce is never permissible."

The President, Mr. T. B. Layton, was in the Chair, and in his opening address made remarks to the effect that he considered that the modern student needed too much spoon-feeding, and that while any society in the Hospital might expect interest and advice from the Staff, it was not the duty of the latter to organise or to take a leading part in its functions. This applied to the Debating Society. Referring to the rule regarding discussion of religion, the President declared that he did not know what this was, but that he would, in interpreting the rule, allow mention and discussion of various religious teachings, but no reference to authenticity or integrity of the sources of these doctrines would be allowed.

Mr. J. Wilkie, proposing the motion, then addressed the House. He laid stress on that function of marriage which was directed to the education of children. Education of the child required individual attention from both man and

woman. If parents disagreed, separation was sufficient; the disadvantage of this state was the penalty of the failure of the marriage. Divorce after the children were fully grown was unnecessary owing to the age of the parents. He concluded by saying that the few hard cases must be sacrificed to preserve the essential function of marriage.

Dr. Felix Brown said that after hearing the proposer's eloquence, he realised that he had been chosen so that the motion would not be lost too easily. He produced Biblical quotations to show that the teaching on this subject was not very definite in Scripture. He agreed that the child required the individual care of a man and a woman; the parents, however, had a right to consider themselves; suitable arrangements might be made to get over the difficulties. In many cases he had known the disagreement between parents had caused functional illness. Separation did not remove the causes of these conditions, and was unsatisfactory to both parties.

Mr. R. Thomas stressed the importance of the family life in national life, after which he became involved in analogies, similes and diverse parables in which he mentioned various surgical instruments, cancer, and mastoid operations.

Mr. D. Stafford-Clarke spoke of certain unfortunate cases; separation was worse than ineffectual, since it restricted the care of the child to one person.

Mr. Clarkson disagreed with separation on the grounds that it promoted illicit unions.

Rev. Fr. O'Flannagen was surprised that the Society regarded as logical arguments certain sentimental examples; he stated that the object of marriage was obviously procreation; if this was to be achieved, then the parents must live together for twenty to thirty years. After this divorce was unnecessary.

In summing up, Dr. Brown stated that he considered that the case of those who would fail in any marriage was an argument for sterilisation, let alone for the indissolubility of marriage. For some, an indissoluble marriage was an ideal state, but, from his knowledge of human weakness, divorce was not only justifiable, but necessary.

Mr. Wilkie again drew attention to the third party, the children, since they were, in fact, the *raison d'etre* of the marriage contract.

The motion was lost by 36 votes to 14.

The Medical Unit of the University of London Officers' Training Corps

(SENIOR DIVISION)

(*This report will be of interest to students who have recently joined the Hospital.*—ED.)

WE at Guy's form one of the eight Companies of the above Unit, and for many years have been the biggest Company in numerical strength. The total establishment of the Unit is 400 Officer Cadets, and each Company is limited to 90; at the moment of writing our strength is 82 out of a total of 384.

Membership is open to all medical students of the Hospital and a limited number of dental students may be enrolled, especially if they purpose adopting a career in the dental branch of one of the Services.

Our aim is to train men to be able to take commissions as medical officers in the Territorial Army, and in the Supplementary Reserve, so that a reserve is built up in case of a national emergency. It may be of interest to many to learn that the League of Nations' Union has issued a pamphlet showing the need for the Officers' Training Corps for the supply of officers.

Our work comprises a minimum of drill and consists largely of lectures and tactical exercises and instruction in the technical side of the Medical Services.

Annually we have a fortnight's camp in the latter half of July, held at such pleasant places as Folkestone, Eastbourne, Sandown (Isle of Wight), and Swanage, which latter was the site of our camp in July last.

Next year at Folkestone the whole of the contingent, consisting of Infantry, Engineers, Artillery, Artillery Survey and Army Service Corps Units, as well as the Medical, will be together, the total strength being well over 1,000 cadets, all being undergraduates from the various institutions of the London University.

The Chancellor, the Earl of Athlone, is our Honorary Colonel, and takes a very keen interest in the Corps, visiting us at annual camp whenever possible, and sometimes staying for more than a day.

Lectures in mufti are given weekly at Guy's on Thursdays in term time, and a voluntary week-end camp is held at our own Standing Camp at Princes

Risborough, Bucks., at Whitsuntide. A Field Day for the Medical Unit is held in the Spring, and visits of an interesting nature, as to the London Docks to inspect a large liner for instruction in sanitation in troopships and the riddance of rats, etc., are usually arranged.

Enrolment involves no liability to military service of any kind, and financial outlay is limited to the purchase of khaki shirts, collars and ties, and a pair of brown boots.

It is hoped that soon accommodation will be available in the Medical School for an Orderly Room, and funds are already to hand for the provision of furniture when this happy state of affairs arrives.

Finally, it should be emphasized that the work entailed is of an extremely interesting nature and very different from the training in Junior Division of the O.T.C., for our job is to turn out technically trained Medical Officers.

Anyone desirous of joining should forthwith get into touch with Mr. Mayer, Orthopædic Registrar, or Mr. Kenshole in the Dental Department, as recruiting for this year will cease during the next week or two.

Sport

Rugby

Guy's v. Harlequins

(At Twickenham on Saturday, October 23rd)

THE Harlequins had a comfortable victory over the Hospital by a placed goal, 2 penalty goals and a try (26 points) to a penalty goal (3 points), yet the game was not so one-sided as the score suggests. Guy's held their own up to the interval, but feeble tackling was responsible for their defeat, and Horsley and Watts showed up the weak points in defence. Between them they registered four tries, and only bad luck prevented them from scoring two more.

Although outweighted, Guy's scrummaged gamely and, thanks to Nicholson's good hooking, Chapman saw plenty of the ball, and sent out a good service to Crawford, but the Quins were so quick on the ball that neither Steytler nor Kynaston were able to make much headway.

On the other hand, Golding and Watts, the opposing halves, had a perfect understanding and gave a first-class exhibition. In fact, Watts was the most polished player on the field; he had a wonderful pair of hands, was quick off the mark, and initiated many fine openings.

A driving rain blowing the length of the ground made conditions very difficult, and play throughout was somewhat scrappy.

Guy's lacked the services of W. J. Lewis, their scrum half, who broke a bone in his hand against Plymouth, and their vice-captain, R. C. S. Dick.

Although they had the wind against them in the first half, the Quins were the first to score, when Chapman kicked an excellent penalty from forty yards out. Shortly afterwards Horsley, profiting from a neat diagonal kick by Watts, touched down in the corner, and immediately Guy's retaliated and Kark kicked a penalty goal.

A ding-dong struggle followed, but the Harlequins succeeded in getting the ball away from their 25 and the forwards swept down to the Hospital's goal-line. From a scrum five yards out, the Quins obtained possession, kept the ball, wheeled and took it over the line. In the scramble that followed Jenkins fell on the ball for an unconverted try.

Just before the interval, Horsley crossed in the corner, but appeared to slip and drop the ball as he was about to touch down.

After changing ends the home side dominated the game, and Horsley had little difficulty in handing off and evading Baxter. On one occasion he got over from a straight forward passing movement and a little later Watts made a great run through the centre before sending Horsley over for his third try.

Van Steytler made a brilliant effort to reduce the deficit, when he cut through the centre in magnificent style, but the movement was spoilt by a forward pass when a score looked certain.

Very little had been seen of Butler, the Harlequins' left wing, but midway through the second half he rounded Allen, the Hospital full-back, but Douglas managed to get back and bring him down when he had the line at his mercy.

Both teams found it difficult to keep their feet on the slippery surface, with the result that mistakes were frequent.

Guy's were now playing a defensive game, and Crawford, Steytler and Allen stood out in particular with well-judged kicks to touch.

However, the Quins would not let the Hospital rest, and the ever-elusive Watts paved the way for another opening, and Kemble had no difficulty in finishing off the movement for a try, which Maycock converted. The same player followed this up with a penalty goal, and near the end Golding

stole away on the blind side of a scrum in the Hospital's 25 and scored an unconverted try.

Team.—R. D. Allen; A. B. Baxter, J. van A. Steytler, R. U. F. Kynaston, D. M. Douglas; J. P. Crawford, D. I. Chapman; H. H. Crabb, E. S. Nicholson (captain), M. R. Kark, C. F. Ziervogel, A. Forbes, G. Morris, R. O. Yerbury, C. S. Darke.

Guy's v. Old Merchant Taylors

(*At Honor Oak Park on Saturday, October 30th*)

HANDICAPPED by the loss of C. Halamandres after the game had been in progress only five minutes, Guy's put up a plucky fight until the last ten minutes, when they were over-run and the Old Boys won comfortably by 2 placed goals and 4 tries (22 points) to nil.

Quite a number of old Guy's men, up for the Biennial Dinner, came down to the ground, where the weather was perfect and conditions ideal for a fast game.

Dick was still an absentee from the Hospital's team, and C. Halamandres made his first appearance in the centre. In addition, Forbes and Allen were unable to turn out on account of injury, and Rowley filled the vacancy at full-back.

Guy's started extremely well, and from the kick-off took the Old Boys by surprise and stormed their line.

A nice cut-through by Crawford and Kynaston was stopped by Huskisson, but Halamandres obtained possession of the ball, crashed through, and was just about to pass five yards from the line when he was brought down and dislocated his shoulder. This was cruel luck to Guy's, who at the time were playing confidently; they reorganised the side by taking Morris out of the pack to take Baxter's place on the wing, the latter occupying Halamandres' place at left centre.

The forward battle was tremendous, and, although handicapped, the Hospital pack got more than their share of the ball in the set scrums, and they played exceedingly well in the loose.

However, the Old Boys back-row forwards were particularly fast, and were on the ball immediately the Hospital attempted any handling movements. The Hospital back division appeared slow in comparison, and they had no one to compare with the Huskisson and Gaff partnership.

Once again the tackling by Guy's was very feeble, and their defence showed up badly when Gaff slipped through the centre to register the first try for the Old Boys.

Guy's managed to hold their own for a time, but a fine raid by the visiting forwards, following a kick ahead by Bywater, carried play to the Hospital's 25. From the scrum that followed, the Old Boys heeled quickly and, following a bout of snappy passing, Huskisson went over for a try, which he converted.

After the interval, Guy's pressed strongly, but could not penetrate an impregnable defence. Darke, Morris and Steytler made several individual attempts to get through, but eventually the Old Boys obtained the upper hand, and in the closing stages pressed incessantly.

Their efforts were rewarded with tries by Wilkins, Turnbull, Hamilton and Gaff, but only one was converted by Huskisson.

Team.—H. A. Rowley; A. B. Baxter, R. U. F. Kynaston, C. Halamandres, D. M. Douglas; J. van A. Steytler, J. P. Crawford; H. H. Crabb, E. S. Nicholson (captain), C. S. Darke, M. R. Kark, J. R. D. Williams, R. O. Yerbury, C. F. Ziervogel, G. Morris.

Guy's v. Cambridge University

(*At Cambridge on Wednesday, November 3rd*)

AFTER a very interesting game, Guy's had to admit defeat by 2 placed goals, a penalty goal and 3 tries (27 points) to a placed goal (5 points).

The Varsity were not quite at full strength as their two regular halves, J. D. Low, the captain, and R. B. Bruce-Lockhart, were absentees.

On the other hand, Guy's were reinforced by the return of Dick, Allen and Fletcher, but as C. S. Darke was unable to make the journey, J. P. Rochford, a freshman from Oxford University, played his first game in the front row of the pack.

Cambridge opened the scoring five minutes after the start, when Reed made a fine run along the right wing and scored in the corner, but after this reverse Guy's checked several promising movements and on one or two occasions came within an ace of scoring.

J. Parsons, deputising for Low at scrum-half, proved a continual menace, especially on the blind side of the scrum, and was responsible for two of the tries.

In the early stages, the University forwards obtained possession in most of the set scrums and were often in good attacking positions, but Guy's overshadowed the Light Blues in the open and allowed few movements to go very far.

After a period of midfield play, Cambridge started a series of short passing movements and, following one of these efforts, Jerwood crossed for an unconverted try.

A little later Parsons dived over for the first of his tries, which Young converted, and just before the interval Dick evaded a tackle and, after several close passes, Fletcher broke through and scored near the posts, for Dick to add the goal points.

Unfortunately, Fletcher damaged his ankle in crossing, and for the rest of the game was badly handicapped.

With only six points separating the sides, Guy's made desperate efforts to reduce the deficit, but as the game progressed the University obtained the upper hand and Parsons caught the Hospital defence napping when he was allowed to slip round the blind side of a scrum for a try, which Young converted.

Shortly afterwards Young kicked a penalty goal, and a loose rush by the Cambridge forwards ended in a try by Way.

The final score came through another solo effort by Parsons, who burst through the centre, punted ahead, gathered and grounded it under the posts, for Young to kick another goal.

Team.—R. D. Allen; A. B. Baxter, R. C. S. Dick, R. U. F. Kynaston, D. M. Douglas; J. P. Crawford, J. van A. Steytler; J. P. Rochford, E. S. Nicholson (captain), H. H. Crabb, J. R. D. Williams, P. J. Fletcher, G. Morris, R. O. Yerbury, C. F. Ziervogel.

Guy's v. Old Blues

(*At Honor Oak Park on Saturday, November 6th*)

ALTHOUGH practically at full strength, Guy's suffered a heavy reverse at the hands of the Old Blues, when they were defeated at home by a placed goal, 3 penalty goals and 2 tries (20 points) to nil.

The Old Boys were superior in every department of the game, and it is a long time since the Hospital gave such a listless display.

The visiting forwards were excellent, especially in the loose, where Undery, Garrard and Ross-Goobey were outstanding. The Old Blues' backs were too fast and clever for the Hospital, and in M. Fulford they had a full-back well above the average.

Guy's were most disappointing, especially in the back division, where van Steytler tried hard to open up the game for his three-quarters, but Crawford spoilt several promising movements by dropping or fumbling passes.

Undery gave the Old Blues an early lead when he kicked a penalty goal from an easy position, and a little later he repeated the effort from a more difficult angle.

Before half-time a brilliant bout of passing between B. P. Knight, D. R. Evans and R. C. Jones completely nonplussed the Hospital defence, and the latter eventually hurled himself over in the corner for an unconverted try.

Keeping up the pressure after the interval, the Old Boys quickly increased their score when E. P. C. Oke scored a try following a five yards' scrum.

Guy's tried hard to get going, but they were met by a deadly defence and little progress was made. In one raid, Evans, one of the Old Boys' centres, was injured and took no further part in the game.

Towards the end the visitors' forwards swept all before them, and Undery was up to register a try, which he converted.

Just on time he kicked a third penalty goal, and when the whistle sounded for no-side the Old Boys were attacking again.

Team.—R. D. Allen; A. B. Baxter, R. U. F. Kynaston, R. C. S. Dick, D. M. Douglas; J. P. Crawford, J. van A. Steytler; J. P. Rochford, E. S. Nicholson (captain), M. R. Kark, J. R. D. Williams, H. H. Crabb, R. O. Yerbury, C. F. Ziervogel, F. R. Turner.

Guy's v. London University

(*At Honor Oak Park on Wednesday, Nov.* 10th)

ONCE again the Hospital were outplayed, and all-round superiority gave the University an overwhelming victory of 5 placed goals, 5 penalty goals and a try (43 points) to a try (3 points).

Guy's fielded an experimental side which included only seven members of the regular fifteen, and although Crabb tried his utmost to urge the side on to greater efforts, he had practically no support.

A feature of the match was the magnificent goal-kicking by A. E. R. Fry, the University full-back, who was successful with ten out of the twelve kicks at goal and obtained twenty-five of his side's points.

The Hospital gave too much away, especially through scrummage infringements, and with such a kicker as Fry against them this proved fatal.

Within five minutes of the start the University took the lead when Lowcock finished off a fine passing movement with a try to which Fry added the goal points.

Guy's responded immediately, and, following severe pressure in the University 25, Kynaston gave Baxter a good pass, and the latter crossed in the corner.

For some minutes the exchanges were fairly even until Guy's gave away two penalties in quick succession, and just before the interval the visitors' forwards stormed the Hospital line and, in trying to clear, Rowley had the misfortune to have his kick charged down and Dyke touched down for a try which Fry improved.

With the exception of one or two occasional raids, the Hospital never looked like scoring, and, as the game progressed, the Hospital forwards went to pieces before the sustained pressure of the University pack. The University obtained the ball almost regularly from the scrums, and, although their three-quarters combined effectively, they were rather inclined to neglect their wings, who were very fast.

Tries came at regular intervals through Van Heerden, Lowcock and Goode, Fry converting these and kicking two more penalty goals.

Team.—H. A. Rowley; A. B. Baxter, R. U. F. Kynaston, I. R. Waters, D. M. Douglas; J. P. Crawford, J. van A. Steytler; J. P. Rochford, R. M. Sharp, H. H. Crabb (captain), J. R. D. Williams, D. W. Burnford, G. P. Sechiari, G. Morris, F. R. Turner.

Rugby Fives

GUY'S v. COLLEGE OF ST. MARK AND ST. JOHN, CHELSEA

(*Played at Chelsea on Saturday, Oct. 16th*)

THE Rugby Fives Club played the first match of the season against the College of St. Mark and St. John at Chelsea, and won by 119 points to 109. Baelz and Smith won all their four games; Lane and Stephens narrowly lost their first two games, and won one game out of three against the last pair.

Scores.—O. H. E. Baelz (captain) and H. D. Smith: 15—10, 15—12, 15—10, 15—8. O. G. Lane and J. W. Stephens: 14—16, 15—16, 7—15, 15—7, 8—15.

Points.—For, 119; against, 109.

Hospital Information, etc.

Pass List

ROYAL COLLEGE OF SURGEONS.

L.D.S.

FIRST PROFESSIONAL EXAMINATION.

September, 1937.

Dental Mechanics and Dental Metallurgy.

A. E. Baxter
W. F. Dunn
P. Fletcher
A. Forbes
W. F. Gibb
F. H. Glass
J. G. Hancock
E. A. G. Hilton
S. Holt
W. E. Jackson
R. G. James
R. C. Jones
R. L. Kenyon
P. D. Kolesar
F. T. J. Limpenny
E. J. Martin
S. G. McCallin
N. H. McLellan
N. M. Midgley
H. J. Nicholls
R. D. Plowman
J. C. Ritchie
I. W. Ross
D. L. Rugg-Easey
J. H. Sarginson
E. S. Smith
F. N. Stares
K. R. Titford
A. T. Vale
G. W. Vincent
H. A. Woodward

General Anatomy and Physiology.

W. T. Athey
J. K. Blackwell
A. H. Bell
J. F. R. Bentley
M. K. Burt
R. R. Darracott
D. K. L. Davies
P. A. Dodington
J. D. Everall
R. C. Green
F. A. Gresham
F. E. B. Heesom
E. A. G. Hilton
R. L. Hurst
E. O. W. Jones
I. A. M. Mitchell
J. F. Mordaunt
T. A. Orchover
J. O. Pierce
G. E. A. Ralston
J. C. Ritchie
I. W. Ross
S. N. Simpson
E. S. Smith

Special Anatomy and Physiology.

W. F. Gibb
R. F. Hoar
S. Holt
J. H. Sarginson
R. A. E. Keeler
A. Pollard
R. B. D. Stocker
G. M. A. M. Whittall
R. J. H. Corfe

HIGHER DENTAL DIPLOMA.

H.D.D. (Edinb.).

Selwyn Holms.

Papers by Guy's Men

Ernest Matthews. Metallic alloys. *Dent, Gaz.*, 1934, iv, 155.

C. H. Rogerson. The psychological factors in asthma-prurigo. *Quart. Jour. Med.*, 1937, vi, n.s., 367.

W. Lindsay Neustatter. The causes of lack of progress at school and their treatment. *Practitioner*, 1937, cxxxix, 607.

W. Sampson Handley. Oral sepsis and malignancy. *Brit. Dent. Jour.*, 1937, lxiii, 501.

H. B. Fenn. The training of dental mechanics. *Ibid.*, 529.

Min Sein. Lead poisoning from lining of copper and brass cooking utensils. *Indian Med. Gaz.*, 1937, lxxii, 595.

—— A case of spontaneous hæmorrhage. *Ibid.*, 612.

Changes of Address

M. E. Gascoine, Crossways, Deepdene Drive, Dorking.

Marriages

HALLAM—WEAVER.—On 28th October, 1937, at the Church of St. Clement Danes, by the Reverend Dudley A. Hodges, John Wemyss Hallam, L.D.S R.C.S.(Eng.), to Marny Weaver.

LODEN—GRIMES.—On November 11th, 1937, at the Church of Our Lady of La Salette, Bermondsey, by the Rev. T. McKenna, C.C., Arthur Loden, M.R.C.S., L.R.C.P., only son of Mrs. Edith and the late Edwin Loden of London, to Anna Grimes, eldest daughter of Mr. and Mrs. John Grimes, of Tullamore, Ireland.

EDS. { H.B.O.C. C.H.E.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

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PASSIM

THE *Gazette*, if it is to continue at all, must have, since men may come and men may go, changes of personnel; and thus it is both permanent and protean, the one state necessitating the other. The arrangement may have its disadvantages, but it has one merit. It means that all critics will sooner or later get their turn. Thus, from time to time the *Gazette* has been abused for being too parochial, and again for being too discursive, for having too much hospital news, for not having enough hospital news, for being serious, for being frivolous, for being political, for taking no interest in politics.

We have often been told that we do not show enough interest in the nursing profession; lately we have shown interest, and it has been implied to us that it would be better if we minded our own business. But having been endowed with noses by the all-seeing Providence, we have felt an inclination to use them, and we have had an interesting nose around and about the nursing problems which have lately occupied a small place in the public consciousness. In our last issue we hesitated to approve whole-heartedly the introduction of political issues into the remedying of nursing conditions. In our present issue we have a letter from Professor Payling Wright which, if we read the implication properly, chides us gently. He turns a penetrating searchlight on the editorial mind by asking if we are sure that our hesitation is not due to the suggested political trend being in opposition to our own. And the implication of that would seem to be that perhaps, in Professor Payling Wright's view, the political trend should find support. The conception of ourselves that our correspondent suggests, as tottering Tories, true blue to the ends of our beards, is a new one to us, and this power of the giftie has given us some amusement.

But with Professor Payling Wright's main contention that we should be surrounded more with the University atmosphere, and should have no truck with limitations of free speech we substantially agree.

There are, it is true, difficulties in the way, but we see no reason why these should not be overcome. The fact that Guy's is not a University should cause no difficulty in itself. Since we have around us all the circumstances of a University the matter resolves itself into a question of terminology. Nor should the fact that some of us are taking degrees at different Universities and that some of us are not taking University degrees at all make the slightest difference to the fact that we are working under conditions which are closely comparable with those of a University existence. Thus, we have the circumstances for the University atmosphere, but somehow the University atmosphere itself seems lacking. One wonders why. The answer lies partly perhaps in the problem of the teaching. We have often felt that in the teaching there is often not enough attention paid to education in general and to learning for its own sake, but that there is too much stress on the practical side of passing examinations, becoming qualified and leaving to take up practice. The matter might be remedied perhaps by steps in two directions. The standard required for admission might be raised, on the one hand, and more full-time teaching posts and professorships might be created, on the other. Such steps would involve complicated questions of finance.

But if there is a lack of University atmosphere in the lives of the medical students, how much more is it not lacking in the lives of the nurses?

It is in this connection that we feel the strongest sympathy with Professor Payling Wright. It causes us frank amazement to learn that any organisations, social, political, or of any other kind, must receive the sanction of the higher authorities before they can be allowed to flourish

in the Nurses' Home. What can be the meaning of such a regulation? Surely it is a rule, like so many others, expressly made to be broken. It suggests to us the control by a spirit of oppression.

The more that we have nosed around the new movement organised by nurses for the improvement of their conditions, the more do we feel that it is an expression of revolt not so much against the length of the hours, the often tedious nature of the duties, the sometimes inadequate living conditions, but against something much more subtle, much more difficult to define. We feel that it is a rebellion against the regimentation of their lives, against the orientation of their minds in a direction to which many have no inclination. It is a reaction not so much against actual factors to which the nurses can point an accusing finger, but against an atmosphere, an abstraction, but an abstraction which is no less real for being elusive. The fact, for instance, that a particular Sister may have access to all a nurse's belongings, that at particular times they may have to be regimented and uniformed when there is no strict necessity for such regimentation and uniformity, that they cannot form a society, should they wish to, without an approving nod from above—these facts, and many others, some necessary and some perhaps that are not, combine to produce an inhibitive atmosphere which may well form the very nucleus of a spirit of rebellion. We believe, further, that it is the difficulty of stating the case and the elusiveness of the goal which is largely responsible for the lack of positive aim behind the new movement. We feel that the movement is striving after something, but that perhaps it knows not quite what, and that in the mist of inadequate analysis of the position it is being side-tracked into a political issue. We do not see that an incursion into politics will help, and we think even that it may harm, for it is adding but another restriction in that those who wish to struggle for improvements may have perforce to hold a political allegiance which they do not really feel.

We see no necessity for the introduction of politics; it is no question of whether the politics to be pursued agree or disagree with our own. There seems no reason why the matter should not be settled without the painful necessity of deciding whether one will vote for the red or blue, and the introduction of such a necessity might have the disadvantage of producing further schism in the already disorganised ranks. Our worthy contemporary the *British Journal of Nursing* has been kind enough, in reviewing the subject, to include us in a category with *John Bull* and the *Daily Mirror* as supporters of the trade union idea. What we have done to deserve such a singular and enviable distinction we do not know, for we have never supported the trade union idea at all. We have only approved, in general terms, of a movement directed towards improving the lot of the junior members of the profession. We have expressed the view that in that function both the College of Nursing and the existing arrangements inside the Hospital are inadequate—useful, no doubt, but inadequate. We are doubtful if the actual form which the new movement has taken will succeed in effecting any considerable improvement of the position, but to our original contention that there is a need for an organisation which has the improvement of the life of the younger nurses as its end in view, we shall still adhere.

▭

CORRESPONDENCE in this issue and the last has shown us that the Hospital Rugby Football Club has not, during the past three years, maintained its high standard of play, and correspondents have put forward their theories for the frequent defeats.

We are told by some that there is an abundance of talent lying idle or remaining undiscovered in junior teams; by others we are told that there is little available talent, and that for some reason the first-class player is no longer choosing to come to Guy's. Lack of enthusiasm in supporting the Hospital from the touch-line is also quoted as a contributory cause of defeat, as is, also, a lack of team spirit on the field.

Our ignorance is such that we are unable to judge the accuracy of these allegations, nor are we in a position to construct a plan sound enough to improve matters, but we would refer you to a letter from Mr. J. E. Giesen in this issue which puts forward several apparently sound suggestions, and which is written by one who is qualified to do so. If these ideas were put into force, it might raise the prestige of our Rugby XV by using available material, and so solve another problem in offering an inexpensive appeal and counter attraction to University "blues" and Colonial players of note.

Whatever happens we hope that the difficulties will not be insurmountable, and that revolution will not arise here, for we feel that it would certainly be a bloody one.

▭

ON Friday, November 12th, the present members of the Hospital Staff gave a dinner to Mr. Eason in the Governors' Dining-room. Sir Arthur Hurst spoke of the work Mr. Eason had done for the Hospital during his period as Superintendent, and asked him to accept a portrait as a memento of his work at Guy's.

▭

WE find pleasure in extending our contratulations to two men, in different spheres, well known at Guy's—one in the past, one at the present time.

Colonel Donald Clewer, L.D.S. (Eng.), has been appointed to the directorship of Army Dental Services. He qualified in 1914 and was in command of the Third Army Dental Centre during the War, later becoming Inspector of Army Dental Services in India. Colonel Clewer's appointment serves to remind us of the number of high commands in the Services held by Guy's men.

Professor C. S. Gibson, O.B.E., M.A., Sc.D., F.R.S., has been elected President of Section B (Chemistry) of the British Association for the Advancement of Science.

THAT scientific work should flourish in the turmoil and devastation of civil war is surely amazing, but we are satisfied that this is indeed so by a letter, printed elsewhere, received by a member of the Staff from Spain.

Science has produced the modern atrocities of warfare, and Science, with a delightfully impersonal attitude, sits amongst the terror and ruin steadily thinking and steadily producing the means by which mankind is able not only to enjoy fresh comforts and live a longer and more leisured span, but by which he may be mangled more horribly and more efficiently than ever before.

Science showers upon us its fiercest horrors and greatest delights with an admirable impartiality.

THOUGHTS of revolution remind us of a letter, which we publish elsewhere, from an indignant correspondent who writes on what he is pleased to miscall the "Oxford Group Movement." In a footnote to another letter on the subject in our last issue we remarked that the Buchman movement was not such as to start a revolution in ourselves. From this our correspondent, following some train of thought which is not clear to us, deduces that we are either too self-satisfied to think that we might be improved, or, alternatively, that we see no room for improvement anywhere. Dear, dear! Whether the conclusions of the writer be right or wrong is a matter into which it might be indelicate to enter, but it seems only too clear that the logical sequence is not intact. We thank our correspondent for an excellent example of the slovenly thinking which, in our experience, seems to permeate the whole processes of Buchmanism.

THE Biennial Dinner, when old Guy's men foregather and dine with their contemporaries, was held on Saturday, October 30th, with Dr. Fawcett, M.D., F.R.C.P., in the Chair.

There was much reminiscing, and from our 1937 seat we longed for the opportunity of comparing the old Guy's with the present, but solaced ourselves with the thought of the College, which stands as permanently as ever a reminder of the past.

Dr. Fawcett in a short speech bade farewell to the departing superintendent, Mr. Eason, and warmly welcomed Professor Johnston, whom he described as one of the best of old Guy's men, though not trained within its walls.

The Treasurer, Lord Nuffield, was unfortunately unable to be present. A telegram was sent by the three hundred and fifty old Guy's men present offering good wishes and congratulating themselves on having him as Treasurer.

THROUGH the generosity of Miss Italia Conti the Hospital is to benefit from a charity matinée performance of "Where the Rainbow Ends," on Friday, the 17th of December. It is proposed that the money so raised shall go to endow a cot in Guy's at a cost of £500. We fear that it is too much to hope that the rainbow with its crock of gold may end elsewhere than in the disused and unequipped quarters of the former Bright Ward, where, despite the elapse of so many months since the Caleb Diplock bequest for new children's accommodation, our youngest patients are still housed. But there is no tax on hope.

WE congratulate the following on their appointments:—

House Surgeons—

To Mr. Doubleday and Mr. Messenger—
Mr. D. W. Bugg.

To Mr. Pritchard and Mr. Hooper—
Mr. G. L. M. Williams.

To Mr. Kelsey Fry and Mr. Rushton—
Mr. R. W. Marston.

To Mr. Bulleid and Mr. Warner—
Mr. P. Ellis.

Children's Department—

To Mr. Bocquet Bull and Mr. Rix—
Senior, Mr. D. L. Goodridge; Junior, Mr. J. E. Tudor; and from Feb. 1st, 1938, Mr. R. L. Greenfield.

Prosthetics Department—

To Prof. H. R. B. Fenn—
Mr. K. A. Stanyon-Jacques.

Assistant House Surgeons—

To Mr. Doubleday and Mr. Messenger—
Mr. A. E. Parrot.

To Mr. Pritchard and Mr. Hooper—
Mr. B. F. Vellender.

To Mr. Kelsey Fry and Mr. Rushton—
Mr. J. W. Truscott.

To Mr. Bulleid and Mr. Warner—
Mr. D. C. Sharp.

Children's Department—

To Mr. Bocquet Bull and Mr. Rix—
Mr. R. D. Pett.

Cardio-Vascular Syphilis

A Clinical Lecture delivered at Guy's Hospital on 29th October, 1937, by E. R. Boland, Esq., F.R.C.P.

GENTLEMEN,—Most of you will remember Henry Cox, the burly dock labourer whose heart for nine years has been the target of hundreds of Guy's stethoscopes and who for many years has been one of the mainstays of the Conjoint Examiners. He died this summer. Peace to his ashes!

The news of his death suggested the subject of this clinical lecture, because there are several points in his history which illustrate some of the most important features of Cardio-Vascular Syphilis which, in the main, concerns syphilis of the aorta, for other syphilitic lesions of the heart seem to be rare. Gummata may occur in the heart in the tertiary stage of syphilis, and are the occasional cause of heart block and other cardiac lesions, but are not very common. There is considerable doubt as to whether syphilis causes myocarditis or not. Warthin, of the U.S.A., has shown to his satisfaction that the heart muscle of syphilitic patients swarms with spirochætes, and is firmly convinced of the existence of such a myocarditis, but the mere presence of spirochætes in an organ does not necessarily mean that they are causing any lesion, and it is probable that all the tissues of the body are full of spirochætes in a syphilitic patient, and it would be strange if the heart muscle were an exception. Besides, although the presence of spirochætes can be demonstrated by what the cautious examinee calls "suitable methods," except in the rare cases of gummata, there does not seem to be any inflammatory reaction in response to their presence, nor does one find any residual fibrosis which might be expected to be the end result of such a process. The case for syphilitic myocarditis must be returned as "Not Proven," although one sees occasionally cases of rapid cardiac failure and inexplicable collapse which could be most easily explained by such a condition. Whatever be the truth, there is no doubt that syphilis of the aorta quite overshadows any such suppositious condition.

Twenty-five years elapsed in Cox's case between the time of infection and the appearance of the aortic symptoms. The latent period is usually a long one, although occasional cases are seen where the incubation period is only a few years. Actually the average duration of the latent period is roughly twenty years, so that cases are rarely seen before the age of 35 at the earliest, the most usual period at which symptoms appear is that between the ages of 40 and 50. Although there are no symptoms during this interval, there is almost certainly active aortitis, and this was practically confirmed by post-mortems done on young negroes killed in the American Army during the War. The probability is that the spirochætes invade the aortic wall within a very short time of primary infection. Why they should lie dormant for so many years and what factors determine their transformation from harmless boarders into virulent parasites is a complete mystery.

At all events, the basic lesion is a destruction of the middle elastic coat of the aorta with œdema and wrinkling of the internal lining. The probable cause of the destruction of the media is an obliterative endarteritis of the vasa vasorum which provide the blood supply for this layer of the aortic wall. The results of a lesion of this sort depend partly on the site of the lesion and partly on concomitant factors. Disease which affects the aortic valves or the mouths of the coronary vessels is obviously more important and more likely to cause symptoms than a similar lesion in more distal parts of the aorta, and, in fact, syphilitic aortitis in more distal parts of the aorta (where it is less common) is often unattended by any symptoms whatsoever. The concomitant factor which influences the possible development of a lesion in syphilitic aortitis is high blood pressure, whether permanent through disease or transitory produced by conditions of work. A patient unfortunate enough to have a syphilitic aortitis is more likely to develop a lesion of his valves, aortic ring or aorta if his habitual blood pressure is 240/120 than if it is 120/80, or if his occupation is one involving sudden tremendous strains, instead of being a purely sedentary one. This is the reason why aneurysms are more often found in blacksmiths, dock labourers and the like than in bank clerks and shop assistants. It is not that hard manual labourers are necessarily less moral, less cautious, or more unlucky than black-coat workers, but simply that, given the syphilis, their occupation increases the risk of complications. The effect of occupation on the production of lesions causing symptoms is shown by the very much greater incidence of these lesions in men than in women. It is at least five times more common in males than in females, but of course the incidence of syphilis in males is much greater than that in females, so that occupation is not the whole story here, but the fact remains that many

of the women who show evidence of aortic lesions are themselves manual labourers.

I have already mentioned the character of the pathological lesions in the aorta; these changes may be found through the whole of the thoracic aorta and even spreading along the main arteries, and may, in addition, be found independently in peripheral arteries, but the portion of the aorta most usually affected is the first part of the ascending aorta where the lesion starts about 2ins. above the aortic valves and thence spreads in either direction, either up the aorta or back to the aortic valves, where it stops short and never invades the ventricular lining. The damage it causes depends on the direction and extent of its spread. The changes often invade the orifices of the coronary arteries, which in the acute stage may be occluded by œdema of their orifices or, in a later stage, by subsequent fibrosis. If they reach the aortic valves, the changes tend to cause dilatation of the aortic ring, and even if the valves themselves are not affected, the commissures between them are so widened that the normal valve is unable to prevent regurgitation. Actually in very many cases the valves do not escape, and the cusps become œdematous and shortened and eventually become sclerosed and contracted with a cord-like thickening of the free margin, and often become adherent to the aortic wall or to each other. During the acute period, the cusps become thin and atrophic, and may be perforated under conditions of sudden strain. All the changes described tend to lead to dilatation of the ring and inadequacy of the valves and contrast with the changes of rheumatic carditis which tend to produce narrowing of the ring and thickening and adhesions of the valve cusps, which not infrequently leads to stenosis, a condition which hardly ever occurs in syphilis except occasionally as a result of superimposed atheroma.

If the aortitis spreads up the aorta it produced weakening of the aortic wall which, under conditions of strain, leads to fusiform dilatation of the aorta, which may give little or no symptoms, or alternatively may lead to a saccular aneurysm through a localised destruction of the middle coat and consequent bulging of the aortic wall.

Relating the probable symptoms to the site of the lesion, it is obvious that disease of the coronary arteries might produce angina or sudden death, lesions of the valves produce cardiac failure, and aneurysm might produce all manner of symptoms from pressure, but it is not easy to decide what one might expect as the symptoms of uncomplicated syphilitic aortitis itself. If it were possible to recognise the basic lesion in its incipient state, rest in bed and antisyphilitic treatment might prevent the complications we have spoken of, but, unfortunately, it is rarely possible to diagnose the condition until complications themselves, not readily susceptible to cure, have developed.

The commonest symptom of aortitis at this early stage appears to be substernal discomfort or ache, which occasionally may be aggravated to a pain anginal in type. However this symptom is never very prominent, and is rarely noticed, although if every patient over the age of 35 complaining of this type of symptom were to have their aorta examined radiologically or their blood examined, more early cases would be detected. In real life, however, the symptoms which usually call attention to a condition already far advanced are angina and dyspnœa.

Angina is most often due to actual involvement of the coronary arteries, although cases are seen in which no actual coronary involvement can be seen at post-mortem. This symptom is often only produced by unusual exertion or emotion as it is in atheroma, and is momentary in duration, but in other cases there is a persistent dull retrosternal pain which becomes agonisingly acute on the least possible exertion, and which persists even when the patient is in bed. When this *status anginosus* is present there are probably active inflammatory processes taking place at the mouth of the coronary arteries, whereas the periodic attacks are more likely to occur after fibrotic changes have taken place.

The other common symptom is breathlessness, and this is probably caused by cardiac failure consequent on aortic incompetence or perhaps by ventricular failure produced by coronary occlusion. The breathlessness varies from slight discomfort on exertion to the most distressing orthopnœa. Occasionally it is paroxysmal, occurring at night, and is then called cardiac asthma, an ominous symptom probably produced by cardiac œdema.

In the light of what I have said about the symptoms, the history of Henry Cox is interesting, for his symptoms were of unusual suddenness. On a certain day, thirteen years ago, Cox was working in the docks, lifting heavy cases without any difficulty. At about 2 o'clock just after lifting a case he suddenly became extremely short of breath and spat up some blood. He went home with difficulty, and very shortly after he noticed a humming noise which he described as being like an aeroplane, and those of you who remember him will not have forgotten how at this stage of his history he always insisted on giving a vivid imitation of it—ZZZzzz—. He went to see his doctor, who told him he had bronchitis, but on Cox saying, " What about this ZZzz ? " the doctor

discovered an aortic lesion. This story of a sudden onset, the actual time of which can be fixed, is quite unlike the usual onset of cardio-vascular syphilis, which is usually insidious, but it is absolutely diagnostic of a ruptured or perforated valve, and I have seen it now in three cases in which the same history would do for any of the three. They were all men who were actually doing heavy manual work or who had just done so. One was an L.G.O.C. driver who stalled his engine on a cold day and who felt something give in his chest as he tried to turn over his engine with the cranking handle. This was followed by a hæmoptysis and some dyspnœa, and when he went home his wife asked him why he was making such a funny noise in his chest! A third man was trying to lift a heavy boiler when he fainted, and was admitted with signs of œdema of the lungs and a murmur like Cox's aeroplane could be heard without a stethoscope. Not only the history obtained in these cases, but the signs were also and equally characteristic of this condition. They all had signs of aortic regurgitation, of course, but the characteristic murmur in each case was musical, "ZZzz," in fact, and all three had a diastolic thrill, a relatively rare event in aortic regurgitation. So that the picture is a clear-cut and definite one. It is interesting that in the last years of his life Cox's murmur lost its musical quality and became the usual blowing murmur of regurgitation. Presumably this change was due to further cicatricial contraction or yielding of the valve.

The symptoms of aneurysm are similar to those I have mentioned, with the addition of pain in the chest not of anginal origin. This varies from a dull ache to continuous agonising pain almost unaffected by exertion—in fact, the patient often walks about or tries deep breathing to free himself from it. It is not certain whether overstretching of the aortic wall can produce symptoms by itself or whether the pain is produced by pressure on nerve endings in bony and mediastinal structures. Whatever its mode of production it is a very important and characteristic symptom, and one which is rarely absent at some stage of development of the aneurysm. No thoracic pain in a patient over 35 should be dismissed without full investigation, since, with the exception of the quite different pain in pleurisy, pain is not a symptom often associated with disease of the lungs, with the single exception of neoplasm of the lungs, where the pain is produced by pressure on adjacent structures, just as it is in aneurysm. I remember well a case I saw years ago in Dr. Marshall's Tuberculosis Clinic. We made the quite correct diagnosis of bronchiectasis, but noticed that he complained of persistent pain in his chest. Eventually we investigated him again on this account and confirmed the presence of bronchiectasis, but noticed that the aorta was wider than normal and found that his Wassermann was strongly positive, and were able to watch in the subsequent months the development of an aneurysmal bulging, which was, of course, responsible for the bronchiectasis.

The signs and symptoms of aortic aneurysm are too well known to require much further attention in a general summary of this sort, but there is no harm in mentioning that if the practice taught in the Pre-Clinical period of laying the hand over the upper half of the sternum and of percussing the upper end of the sternum when mapping out the heart were more generally remembered, fewer cases would be missed in a relatively early stage of development, and there would be less grief and suffering at the Examination Hall. There is also quite a common belief that signs of compression of the superior vena cava are not found in aneurysm of the aorta, but actually aneurysm is at least as common a cause of this rare condition as any other mediastinal tumour.

Another point to remember is that, although radiology is invaluable in the diagnosis of aneurysm, the plate often only shows a mediastinal mass not obviously part of the aorta. Often the differential diagnosis of this shadow is made to depend on the presence or absence of pulsation. If it pulsates it is usually said to be an aneurysm; if it does not it is said to be a mediastinal neoplasm. The absence of pulsation is, however, a fallacious guide, as is often shown by the subsequent post-mortem. In actual practice there is often so much clot in the aneurysmal sac that even when the aneurysm can be taken hold of by the hand very little arterial pulsation can be felt. I once saw a case of aneurysm in which the whole of the sternum and most of the ribs had completely disappeared and there was an ulcerating swelling, the size of a rugby football, projecting in their place. Practically no pulsation could be felt, and the reason for this was apparent when it was seen at post-mortem that there was about a couple of pounds of organised clot in the aneurysmal sac. The presence of this mass of clot accounts for the fact that aneurysms, however large and however superficial, virtually never rupture, but nearly always burst internally near, so to speak, the business end of the aneurysm. It also explains the disappointment of those who, half in hope, half in dread, attended to see the insertion of gold wire into some of Dr. Poulton's cases of aneurysm. Nothing more spectacular

than a very slight extravasation of blood took place, and the insertion of the wire was unsuccessful because of the presence of clot.

To judge by the Hospital figures, the incidence of diagnosable syphilitic aortitis has apparently diminished of recent years, but the prognosis still remains a bad one. Most clinicians suggest an average figure of four years from the time of diagnosis, although, as I have already suggested, the aortitis is probably present for quite a considerable time before the symptoms appear. Carey Coombs, for example, gives the duration of life in 103 of his cases. Of 40 cases traced four years after diagnosis, 19 were dead and 21 alive; 17 of these deaths occurred within $2\frac{1}{2}$ years. Of 20 cases seen up to eight years after diagnosis, 13 were dead, 7 alive. Of 28 cases traced nine to twelve years after diagnosis, only one was alive.

I followed up a series of Guy's cases some time ago and roughly the same figures were found, except that I found more cases which had survived for over ten years. Many cases die within 18 months of diagnosis, which means that those who survive this period may live for several years, and in every series of cases a few cases are found to have survived for ten or more years. Cox, for example, lived for 13 years, but it may be taken that few cases survive beyond five years, and hardly any beyond twelve.

It is an amiable habit of textbooks to give a full picture of the pathology of a disease, tell you that the prognosis is hopeless, and then start cheerfully to describe the treatment in great detail. Such descriptions start under a heavy cloud, and you might think the same of the treatment of cardio-vascular syphilis. It is difficult to decide what difference specific treatment of this condition by means of Salvarsan and its derivatives has made to the expectation of life, but the balance of evidence suggests that its introduction has lengthened this by a year or two at least, especially in the case of aneurysm. Not brilliant, perhaps, but a start, and two years is often worth having, and it is tempting to ascribe the occasional survival of cases for many years to this form of treatment.

I think there can be little doubt that we achieve some success by anti-specific treatment, but if our success in prolonging life is doubtful there is no doubt that we can shorten it by bad treatment.

One of the dangers of the introduction of a specific method of treatment is that basic principles in the treatment of a case as a whole are sometimes forgotten in the enthusiasm of applying what seems more direct treatment. It is not absolutely unknown for patients to come into Hospital with symptoms of cardiac failure and for them to be sent out after a short period in bed to attend at the Annexe for injections. For some reason they are treated differently from other cases of cardiac failure, as if rest was not so essential a form of treatment as in other cases, but injections are no substitute for rest, and I think three months in bed is not a day too long in these cases, and feel that if one could rest them in bed for six months their expectation of life would be appreciably longer.

With regard to N.A.B. treatment there is evidence to show that, however thorough the treatment, living spirochætes survive in the aortic wall, so that treatment should persist at intervals through life. It is well not to be too energetic with treatment at the start. Ever since the introduction of Salvarsan there has been a tradition that it must be given with caution in syphilitic cases. Of course, Salvarsan was given intravenously with large amounts of fluid, and this may have caused cardiac or respiratory failure. Cotton stated that he had never seen any deleterious effects of the injection of N.A.B. in a long review of cases, and the head of a German clinic with tremendous experience has stated the same. However, there is a fair number of cases on record where death has followed almost immediately after injection. I have seen two cases myself which died within two hours of intravenous injection of N.A.B. You must remember that sudden death is a common occurrence in any event in cardio-vascular syphilis, but death in these two cases certainly appeared to be more then coincidence. Further, I have seen cases of congestive cardiac failure which have complained of severe subjective symptoms with each injection and objective evidence of deterioration has accompanied the symptoms, and I remember one case where the symptoms became progressively worse with each injection at the Annexe, and eventually he was admitted here and died shortly after an injection.

The old advice of giving Pot. Iodide and Mercury before N.A.B. was a sound one, if for no other reason than that the patient is likely to be kept in bed at least that long, but even then I think intravenous injections are best avoided altogether during the first course and intramuscular injections of Stabilarsan or some other similar preparation substituted for it. It is probable that the occasional deleterious or fatal effects of intravenous injections are due to a Jarisch-Herxheimer reaction producing a focal reaction and temporarily aggravating the effects of the syphilitic lesion in the aorta or heart muscle. The likelihood of such a result becomes less as time goes on. The treatment of the congestive cardiac

failure is rest, rest and more rest. Always remembering that there is no type of cardiac failure which has a worse prognosis than that due to syphilis.

In the after treatment it is essential that all violent exertion, exercise or emotion should be avoided permanently. The whole life of the patient must be reorganised so far as possible to ensure as peaceful and equable a life as possible, and he should be made to eat and drink with great moderation. Cold baths and exposure to great differences of temperature and constipation are guarded against. In fact, medical advice is directed to keeping the blood pressure as low as possible and securing rest.

Disappointments will often be met with in the treatment of aneurysm for quite often antisyphilitic treatment will render the Wassermann negative, but the enlargement of the aneurysm continues inexorably. Once the aortic wall is seriously damaged, mechanical factors conduce to steady enlargement of the aneurysm, even if the process which originally caused the damage comes to an end just as a motor tyre which has been pinched tends to develop a terminal protrusion as a result of internal pressure even if the original injury is at an end.

It is surprising, however, how well patients can remain on this regime and how often they seem to survive for longer than the theoretical average period.

Industry and Dental Disease

A Paper read before the Guy's Hospital Dental Society by A. E. Parrott, Esq.

MR. CHAIRMAN and GENTLEMEN,—Some of my friends have expressed their surprise that I should choose to speak upon the subject of industry. Let me reassure you that I am in no way violating any of my principles, nor have I suddenly turned over a new leaf, for in this paper it will be my aim to impress upon you a very few of the awful consequences of being industrious.

So familiar are we to-day with the existence of industrial diseases that we are apt to accept them unquestioningly as the inevitable adjuncts of civilisation, as we do dictators, caries, and painted finger-nails. But if I do nothing else to-night, I hope that I may at least sow in your minds the seeds of doubt; to make you ask yourselves whether, despite the enormous strides that have recently been made in industrial legislation, public conscience could not further be aroused to bring about still better conditions to safeguard the health of those by whose sweat we are able to call ourselves civilised. So for a moment I will dwell upon the historical and general aspects, before speaking of the specifically medico-dental side of the subject.

That such diseases exist has long been recognised. As far back as 460 B.C. Hippocrates, revered by us as the Father of Medicine, observed that "there are many handicrafts and arts which cause those who exercise them certain plagues." That may appear to us merely an uninteresting statement of a very obvious state of affairs, but, coming from the lips of Hippocrates, we should acknowledge it as a priceless aphorism, a gem of inspired perception. The first man really to study the whole question of occupational diseases, their causes, conditions and possible cures and prevention was Bernando Ramazzini, of Pisa. In 1690 he published his "De Morbis Artificium Diatriba," in which he stressed the importance of industrial hygiene, and showed why the physician should always ask the occupation of his patient. Mercurial poisoning was familiar to him, an Italian. He noted that the condition of those few miners who managed to survive more than a very short term of employment became so miserable that death was all their wishes. Their necks and hands trembled, their teeth fell out, and they bore foul and stinking ulcers all over their bodies. For a hundred and fifty years Ramazzini's was the standard work of its kind, and was translated into English and many other tongues.

With the appalling conditions engendered by the industrial revolution, when the workers' bodies and souls were distorted, maimed, and beaten down by the bitter struggle for a bare existence, a little wave of humanitarianism spread over the country. A powerful leavening of decent people became horrified as they grew to realise the loss of life and health and morale so brought about, and the question of industrial disease was studied with a new vigour. A typical example of the sentiments inspiring these reforms is provided by this passage from an article written in the *Edinburgh Review* by a Doctor Andrew Wynter, M.D.:—

"Accustomed as we are to sip the honey, it never strikes us that perhaps its product in some cases involves the life of the working-bee. Yet the lady who, from the silken ease of her fauteuil,

surveys her drawing-room, may learn a lesson of compassion for the poor workman in nearly every article that lies before her. Those glazed visiting-cards, if they could speak, possibly could tell of the paralysed hand that made them; that splendid mirror has, without doubt, reflected the trembling form of the emaciated Italian artificer, poisoned with mercurial fumes; those hangings, so soft and delicate, may have produced permanent disease in the weaver; the porcelain vase upon the bracket has dragged the 'dipper's' hand into a poison that, sooner or later, will destroy its power, and, maybe, produce in him mania, blindness, and even death. Nay, the very paper upon the walls, tinted with all the vernal brightness of spring, has, for all we know, ulcerated with its poisonous fumes the fingers of the hanger."

One great work in particular resulted from this stimulus, and that was Turner Thackrah's "Effects of the Principal Arts, Trades, and Professions upon Health." Published in 1831, it did much towards the passing of the first Fatal Accidents Act of 1846 and to the enactment of later factory sanitation laws. He was one of the first to insist upon the relation of the economic insecurity of the worker and the maintenance of health, and had the audacity to suggest as preventive measures, fresh air, bathing, muscular activity, and—incredible impudence!—shorter hours. All reforms were not welcomed by those whom they were intended to benefit. As late as 1850, when a plan to instal fans and shields to remove the fatal dust in a Sheffield razor-grinding factory was put forward, a deputation of operatives protested that "Trade is bad enough as it is, and, if men lived longer, it would be so over-full that there would be no such thing as earning a living."

It is a sad commentary upon our shallow morality that the most active and effective researches into industrial medicine came as a result of economic, rather than from purely medical and humane factors, particularly when employers were forced to compensate injured workers. Previously, they cared little for their health; output was not affected by lack of labour, for there was an unlimited supply of men, women and little children waiting in an unending queue, spurred on by stark poverty to step into a dead or disabled worker's place at the lathe or the loom. But, with the prohibition of child-labour and other reforms, the pockets of the employers became directly affected; it was now in their interest to have fitter men at the factories, and science was called in to suggest improvements, always provided that such improvements were compatible with a good rate of profit.

Unfortunately, then as now, the advice of the dentist was unasked and ignored in the drawing-up of legislation. Even now no uniformity exists in the compensation paid for dental and oral damage. We know how great is the effect of oral disease upon general health, how foci of infection delay recovery from injury, but until we can make the captains of industry still more interested in keeping their employees in an employable state of health, until the number of dentists employed by industry is increased a hundredfold, the dental condition of the average worker will continue, through avarice and through ignorance, to be a menace to himself and a handicap in his work. And coupled to industrial hazards are the predisposing factors arising from economic conditions. Thousands of children are doomed in advance to bad teeth because there is no money to buy them proper food. Yet nobody in their senses can deny that, if the productive facilities of the world were to be used to their full and proper extent, good food there would be for one and all. We shall find no solution to many of our gravest problems in industrial health until we have emerged from this modern chaos of poverty in the midst of plenty.

The connection between occupation and disease is not always immediately apparent. A painstaking amassing of statistics made by the Ministry of Health, once provided the information that the incidence of carcinoma of the tongue was highest in potmen and lowest in Nonconformist ministers. Industrial hazards may come in two guises: as mechanical, physical or traumatic factors, in which group are those mishaps known as "industrial accidents," or as the result of the deleterious nature of certain materials to which the worker is exposed. Perhaps we may modestly put ourselves forward as examples of both types. Attend any gathering of the elder brethren of our profession and observe how many of them are flat-footed, bow-legged, short-sighted, round-shouldered, pigeon-chested, kyphotic, wheezing wrecks. See how they bear the stigmata of novocain dermatitis, phenol ulcers, and even inoculated syphilis. How easily could they prevent this by sitting down to operate and having relays of nurses to perform all trivial tasks!

A detailed account of the first group is not my intention to-night. You are all familiar with the bizarre incisors of the glass-blower, cobbler and seamstress. One interesting case is cited by Salzmann of a cigar-roller, who bit off the ends of the cigars to finish them. His incisors developed periapical areas of bone rarefaction, probably cementomata, which cleared up, if radiographic evidence be believed, upon the relinquishment of his occupation. One other physical influence upon the mouth is that of prolonged exposure to

dry heat, as seen in stokers, puddlers, annealers, and the like. Their oral mucosa dries and fissures and desquamates, they develop a stomatitis, sordes form readily, and the saliva flows too feebly to keep the mouth clean, with the result that caries follows quickly. Much relief may be given by the extensive use of fans, shields, and exhaust systems, together with plenty of water to drink and a minimum consumption of alcohol and tobacco.

The second group includes the vast category of industrial poisons. Such materials are generally encountered as dusts, gases or liquids, or they may occur amphoterically.

Dusts are of many kinds. They may be organic or inorganic, soluble or insoluble; they may act as chemical or as physical irritants, whilst some may be carriers of bacterial infection. In fact, we may read a new and sinister meaning into the "Dust to Dust" of the burial service.

A marked dust-gingivitis is met with in textile workers, jute handlers, asbestos and paper makers —in fact, to anybody constantly exposed to fine, soft, organic dusts. The gums become swollen, the margins a livid red and quick to bleed. Eating is painful, and the submaxillary and submental lymph-glands swell. In chronic cases this is followed by pyorrhœa, nasal symptoms, hoarseness, coughing and a chronic catarrhal stomatitis. There is only one real prophylaxis for this: adequate ventilation and dust-withdrawal. This is the key-remedy to the prevention of the majority of industrial poisonings, and one that cannot be too rigidly forced upon employers.

From an elementary acquaintance with the doctrines of Miller and Sim Wallace we could foresee the result of being exposed to carbohydrate dusts. Millers, bakers, pastrycooks, sweet and chocolate makers and packers, are perpetually exposed to floating particles of flour and sugar. These form with the saliva a sticky pabulum about the necks of the teeth, and proceed to demonstrate the validity of the classical chemico-parasitic theory far more quickly and efficiently than any amount of anthropological research into the incidence of caries amongst the molasses-eating Mumbo M'jumbo tribes could do. The teeth, particularly the anterior ones, become decalcified and absorbed until they are mere stumps level with the gum. Furthermore, in addition to these purely exogenous and local factors at work, we should remember that cereals have been shown by Mellanby to possess a general decalcifying effect when taken into the system, so miller and baker are doubly damned. Since so much of this kind of work is carried on in very small establishments, effective legislation is difficult. In addition to securing proper ventilation and dust-withdrawal, employers should provide a suitable mouthwash, such as sodium bicarbonate, to be used several times daily, and be a little more considerate about letting their employees have time off from work, when necessary, to receive dental treatment. It was once observed in Manchester that the proud cultivators of luxuriant, drooping moustachios possessed in them natural respirators, and suffered less from the deleterious effects of occupational dust than their clean-shaven or subalternesque colleagues. Perhaps the Master Bakers' union would find it profitable to emulate the Brigade of Guards and prohibit the shaving of the upper lip.

It is very probable that the ray-fungus of actinomycosis may gain entrance to the mouths of farm labourers during the dusty tasks of threshing and winnowing, though admittedly many investigators now deny that actinomycosis is a specific curse of rural life.

Yet another effect of dust is the liability to cause an allergic gingivitis; it has been shown that an allergy may take effect in a localised and circumscribed area of the skin or mucous membrane as well as throughout the whole system.

The metallic poisons contribute to some of the most severe occupational diseases. Particles of metal may enter the mouth as dust, or they may enter the system as fumes or liquid compounds.

One of the oldest metallic poisons met with in industry is mercury; it was observed in 980 by Avicenna, the great Arabian physician. The most striking manifestations of this poisoning are in the mouth—the extremely severe gingivo-stomatitis and excessive salivation. It was formerly believed that the former was caused by the actual secretion of mercury through the glands of the oral mucous membrane and in the saliva, resulting in poisoning and necrosis. The theory of Almkvist is now accepted as the true account of its pathogenesis, and is worth summarising.

First, the absorbed mercury combines in part with the hæmoglobin, forming a precipitate, possibly mercury albuminate. This clogs the finest of the capillary loops within the gum-margin. Thus, the normal process of oxidation is impeded and lactic acid is formed in the tissue, resulting in lowered vitality. Putrefactive bacteria, chiefly the fusiform bacillus and its symbiotic spirochætes, decompose the protein débris which has accumulated about these damaged tissues, with liberation of hydrogen sulphide and ammonia. These gases erode and break the continuity of the oral epithelium, and the hydrogen sulphide penetrates further into the inflamed deeper structures of the exposed connective tissue, and, on meeting the accumulated mercury, forms mercuric

sulphide. Circulation and nutrition are impaired, necrosis occurs, and filth collects about these necrotic areas. Putrefactive bacteria feed upon this and multiply, and the cycle results in an ulcero-membranous gingivitis of a most serious type.

The first symptoms of mercurial poisoning are a metallic taste and an uneasy feeling to the tongue about the labial surfaces of the lower incisors. The interdental papillæ are tender and swollen, and of a bluish tinge. The disease gains a foothold at any point of inflammation (as at the irritated tissue near a bad filling or a cervical cavity) and the gum margin becomes covered with a green, pseudo-diphtheritic membrane, which, when wiped off, leaves a bleeding surface. The tips of the interdental papillæ ulcerate and lesions occur in the cheek adjacent to the occlusal surfaces of the cheek teeth. The breath is characteristically stinking.

Treatment consists in removal from exposure to, and elimination of, mercury, by intravenous injections of sodium thiosulphate (Ravaut) or of sodium formaldehyde-sulphoxalate (Rosenthal). Workers in many strange trades suffer from mercurial poisoning, such as thermometer makers, hat makers, mirror silverers, and compounders of bad silver-polishing preparations.

Next to iron, lead is probably the most universally employed metal, if one may include its many compounds. Artists who lick their brushes, house painters, file cutters, and glazers of the finest pottery are a few of those who contract lead-poisoning, besides the many who deal with the actual extraction of lead from its ores and the making of its compounds. Entry is gained through the mouth and nose and skin, whilst fine particles of white lead dust, falling upon the eyes, may be dissolved by the lachrymal fluid and absorbed into the system. Suspended in the saliva, lead and its compounds are swallowed and converted by the hydrochloric acid in the stomach into soluble compounds.

The symptoms of advanced " plumbism " are pallor, bloodlessness, and the " Saturnine Cachëxia," followed later by nervous symptoms : ankle- and wrist-drop, blindness, encephalopathy and insanity, and by recognising the early oral signs we may be able to diagnose and treat the condition before its more terrible manifestations take hold. The Burtonian " blue line " is the classical sign that lead is in the system. This line varies in type and degree. It may be a purely superficial collection of particles about the gum-margin, occurring very soon after quite a short exposure to lead dust or fumes, and disappearing on washing out the mouth. In cases of longer standing it is a line of varying width and density, patchy or continuous, distinct or diffuse, and blue patches may often be found on the cheek, usually opposite large aggregates of tartar. Careful examination of this blue line with a hand lens will disclose an essential point—it is in reality not continuous, but of a typically stippled appearance. Goadby states that this line is never encountered in perfectly clean and tartar-free mouths, and his animal experiments seem to confirm this. Its presence and colour is due to the formation of lead sulphide within the marginal tissues, but whether this is formed by the hydrogen sulphide blended by putrefying proteins or by the sulphocyanates present in the saliva is unknown. If Goadby's statement that it occurs only in unclean mouths be true, then the former explanation probably holds. Were it on account of the sulphocyanates in the saliva, it would surely appear in all mouths, clean or not, which were exposed to lead, for the sulphocyanates are normal constituents of the saliva. There is in lead poisoning a sweetish taste in the mouth and a characteristic smell to the breath.

Both bismuth and silver poisonings are characterised by a pigmented line at the gum margins, the first of a blue, and the second of a violet, colour. Neither of them are often met with in industry save in the miners of the metals, though bismuth poisoning may be contracted occasionally by typefounders and argyria by jewellers, silver-platers, and photographic chemical handlers.

Arsenic, which may attack arsenic-roasters, colour workers, printers, sheep-dip makers, tanners and lithographers, to mention a few occupations, may enter the body as a dust, vapour or fluid. It irritates the oral mucosa and, like phosphorus, exerts a local action upon the jaws, causing severe necrosis and sometimes death. It may be a comforting thought to some of us that the only fatal case of arsenic poisoning caused through swallowing an arsenical dental dressing, recorded by Prinz and Greenbaum, was of a dentist who had attempted to insert two such dressings into his own tooth and swallowed them both.

Copper is another metal whose presence is betrayed by a discolouration of the teeth and gums. In this case the line is diffuse and greenish, and the teeth themselves are usually stained green. Goadby records a case in a man whose occupation it was to clean the whirring commutators of a dynamo with sandpaper.

In these days of chromium-plated cars, furniture and cuff-links, it is not surprising to find that there has been a steady increase in the number of cases of chromium poisoning. In the process of electroplating, chromic acid is sent off as a fine spray by the bursting bubbles of gas at the elec-

trodes of the plating tanks. This causes inflammation and ulceration of the oral mucous membrane and necrosis of the bone, followed often by perforation of the nasal septum. White petroleum should be applied to the affected parts as soon as the condition becomes noticed.

Phosphorus poisoning we all know. It is the darling of our textbooks, and is certainly an awful example of the sacrifice of man to Mammon. It has ceased to be an industrial disease of any importance since legislation in 1899, though there are still one or two cases arising in match factories under the control of certain countries who failed to ratify the Geneva agreements on industrial health. It begins in the mucous membrane of the jaw as a result of inhaling phosphorus fumes, particularly the oxides, and, by a process still not very well understood, causes a necrosis in the bone. Sometimes the necrosis may not become obvious until a tooth is removed, when a necrotic area is discovered around the socket. The healthier the condition of the teeth and gums, the less likelihood is there of necrosis taking place, though, as in many other poisonings, an individual immunity may be present, and those with very foul mouths may yet escape the ravages of the disease. Legislation was unusually prompt in the case of phossy-jaw, for public opinion was touched by the essentially dramatic qualities of its hideous disfigurement. Most severe industrial poisonings are less fortunate, for they are insidious and lack the necessary vein of spectacular macabre to bring them publicity. Mimi could never have died from mercurial poisoning, and Camille would have been a poor rôle for Garbo had she been a victim of plumbism instead of phthisis, and disclosed a Burtonian line when her lips were parted in the smile of death. And the accompanying *fœtor oris* would have probably proved too much even for the staunch devotion of a Robert Taylor.

Many workers are exposed to acid and caustic fumes, which, by direct action, destroy the inorganic matrix of the teeth. Such teeth present the strange appearance of brown, leathery moulds, resembling miniature chocolate blanc-manges shaped like teeth. This brown substance, the organic part of the tooth, soon wears away and becomes absorbed. A case of this kind, reported by Rousseau-Decelle, provided an interesting example of the tooth's ability, as a vital organ, to resist or succumb to exogenous decalcifying agents. The patient was exposed at his work in a chemical factory to certain acid vapours, but, strangely enough, it was only the teeth of the left side that had disintegrated, and these were absorbed to gum-level. It was first suggested that the patient habitually slept on his left side, and that these teeth were therefore more consistently bathed in the acid saliva than were those of the right side. This, however, was proved to be incorrect, and it was eventually realised that the patient suffered from a Claude-Bernard-Horner syndrome. This, as every schoolboy knows, is a unilateral paralysis of the cervical sympathetic nerves, resulting in trophic disturbance on the one side of the face, with ptosis, affection of the sweat-glands of that cheek, and other sympathetic symptoms. Through this impairment of their sympathetic supply, these teeth had lost their innate power to resist the erosion.

Since boyhood I had always envied the lot of the chauffeur. They seemed to have little to do other than drive superb cars, in the intervals of sitting in them and reading just the papers and magazines that I was never allowed to read. But I did not realise then that they were potential victims of a specific gingivitis. Rost and Werner, of Heidelberg, found that mineral oils, and their fumes and vapours, had the property of stimulating certain granulatory growths within the tissues, and Weinberger ascribed to this the existence of a gingivitis which he found in chauffeurs, motormen, machine fitters, oil-tank workers and others exposed to crude oil and petrol vapours. The clinical signs are very similar to those of dust gingivitis; a glazed swelling of the gum margins, free hæmorrhage and catarrhal stomatitis.

Whether vagabondage can be classed as an industry is a hotly contested point. There is, however, a "Vagabonds' Disease" suffered by tramps, rag-pickers, and others whom society and misfortune have condemned to live amidst filth and in whose clothing body-lice swarm. The venom of these parasites is absorbed into the system and causes a dirty-brown pigmentation of the oral mucosa in the form of patches not unlike those of Addison's disease.

In this country we are unlikely to meet with many cases of radium poisoning. In the early days of unguarded X-ray apparatus many pioneers were attacked, and in the small radium industry, the tubing and mounting of radium for needles and bombs, it is impossible properly to protect the workers. In America it was found that operatives engaged in painting the dials of luminous clocks and watches were in the habit of licking their brushes. Small particles of the radioactive paint stuck to their gums and gave rise to a severe and intractable type of gingivo-stomatitis, accompanied by necrosis of the bone. The official reports on the dental condition of these workers found that there were two types of bony change: focal atrophy, rarefaction or osteoporosis, and focal sclerosis or osteosclerosis.

But this atrophy does not simulate osteomyelitis, where irregular bone-destruction and "scar" bone-repair go hand in hand with the characteristic "moth-eaten" radiographic appearance. It was concluded that the brush-licking was not the sole cause, and that inhalation was largely contributory. This whole subject is extremely interesting: its diagnosis by the use of the electroscope and its attempted elimination by calcium, founded upon a most ingenious theory of Evans and Ware, and the important question of the possibility of the offspring of such workers becoming themselves affected.

There are many other occupational diseases with oral manifestations, of which I have neither the time nor the knowledge to speak. There is the strange osteitis fibrosa suffered by mother-of-pearl turners. Though first reported in Austria in the nineties, and at odd intervals ever since, little or nothing is known of its ætiology. It is signalled by sudden and severe pain in the body of the mandible, rise in temperature, acute gingivitis and loosening of the teeth, though suppuration and necrosis have never been observed. There is the epithelioma of the coal-tar and aniline worker, the bleeding and cyanosis of the oral mucosa of the diver and caisson worker. As I mentioned earlier, many dusts may be the carriers of bacteria, and we may see employees from the tanneries near this Hospital bearing the signs of anthrax in their mouths.

To mention all of these would require the large book that I hope will some day be written. Nevertheless, I do believe that a knowledge of the conditions to which many of our patients are subjected in the course of their every-day work will help us to make proper diagnoses and to suggest effective treatment and prophylaxis. Through our individual experience with such conditions and the information we can gain from it we can, by influence, advice and example do much to improve them, and we must do our utmost to better the health and happiness of the most numerous, most unhealthy, most underpaid and undernourished, and by far the most important class in the world—the workers.

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Reviews

A Manual of Local Anæsthesia in General Dentistry. By EUGENE SCHMITT, D.D.S. Published by The Amalgamated Dental Co., Ltd. Pp. 68. *Price 5s.*

THIS book is beautifully illustrated and should be of great help to the student commencing local anæsthesia, although it cannot replace the textbooks on the subject.

The technique of each injection is described very simply, and is illustrated by plates showing the nerve innervation to each tooth, the hypodermic needle in place on the skull, and the position and direction of the needle in the patient's mouth. The amount of solution necessary for anæsthesia accompanies each description.

Dr. Schmitt stresses the importance of depositing the solution "drop by drop," as a quicker and better anæsthesia develops in this way, and any uncomfortable "blowing-up" of the tissues is avoided.

A lingual injection is described where the solution is deposited submucously on the lingual surface of the mandible. This is a painful injection on account of the thin covering of mucoperiosteum over the bone in this position. Although the amount of solution to be injected is only ten drops, the injection of the lingual nerve as it lies near to the inferior dental nerve in the mandibular sulcus is to be preferred, and the other injection avoided whenever possible.

There is a useful section on the anatomy of the jaws in so far as it affects local anæsthesia.

Information about local anæsthetic solutions is

hardly adequate, and its absence rather spoils the completeness of this otherwise excellent manual.

Finally, the card binding boards are by no means worthy of the paper used or the illustrations. This is a pity, as a book which will soon rag and tatter is not suitable for constant reference, the main object of this manual's publication.

Medicine—Essentials for Practitioners and Students. By G. E. BEAUMONT, D.M., F.R.C.P., D.P.H. Published by Messrs. J. & A. Churchill, Ltd. Pp. 780. *Price* 21*s.*

THE author states in his preface that his endeavour is to include the essentials of medicine with the omission of all extraneous matter; as far as is humanly possible this Utopia is achieved. The result is a book which is an eminently satisfactory compromise between the curt brevity of an examination textbook and the more voluminous tomes of reference.

The ætiology, pathology, clinical features and treatment of each disease are clearly set out under separate headings, and in all but the rarer ailments the differential diagnosis and complications are also separately dealt with. In many cases the author commences his description of the disease with a definition; often this is most useful, but occasionally seems somewhat superfluous—*e.g.*, Intracranial Hæmorrhage is defined as "Hæmorrhage into the brain or meningeal spaces"—a fact which surely would be appreciated by even the dullest wite!

The book is now in its third edition, and whilst there have been no radical alterations since the last edition, there have been many minor additions and some sections rewritten. The number of illustrations has been increased, and indeed they are so excellent that one only wishes that this increase had been greater.

Altogether this is a volume which can be recommended to student and practitioner.

A. M. H.

Textbook of Histology for Medical Students. By EVELYN E. HEWER, D.Sc. (Lond.). Published by Messrs. William Heinemann, Ltd., London. *Price* 15*s.*

WE have often considered all the difficulties an author must face in preparing a work on a descriptive science such as Normal Histology, and when we find one who not only produces an excellent volume, but who has also provided so many original photographs and drawings prepared from her own material, we feel that this is sufficient recommendation in itself.

But there is more than this. The author has had twenty-one years of experience of teaching medical students, and has realised the necessity of acquiring a sound knowledge of normal histology before embarking upon a study of the abnormal.

The epithelial and connective tissues of the body are described in some detail in the earlier chapters, the remaining chapters being devoted to the various systems in a more specialised manner. The micro-photographs and drawings are of high quality throughout, and are of a type which can be of great assistance during practical work. The text is abundant in detail, but sufficient emphasis is laid throughout upon the more important features. While the author has attempted, as far as possible, to omit details of purely academic interest, a good deal of this matter has still been allowed to remain.

We were particularly impressed with the sections dealing with the ear and central nervous system. The plates and diagrams in these sections are of outstanding quality.

While this volume would seem to be of greatest value to those taking higher examinations, we would recommend it as a sound textbook and as an adequate basis for the later study of Morbid Histology.

J. J. D.

A Practice of Orthopædic Surgery. By T. P. MCMURRAY, M.B., M.Ch., F.R.C.S. (Edin.). Published by Messrs. Edward Arnold & Co. Pp. 471, with 178 Plates and Figures. *Price* 21*s.*

THE student in preparing for his final examinations in surgery is all too often content to read the section on orthopædics in one of the textbooks of general surgery, because no doubt he feels that this is a specialised subject and that the textbooks devoted entirely to this subject are beyond his scope and time available.

In this volume we have a concise survey of the whole subject. The author has, quite rightly, omitted the details of various operative procedures which are included in the larger textbooks, while providing all the material necessary for the student and general practitioner. The book has been prepared with great care, is easy to read, and there are many excellent plates and figures. We were particularly interested in those chapters devoted to diseases of joints, and, while giving a clear description of the various lesions which occur, these chapters contain many sound surgical principles capable of general application.

It is a volume which should be read by every student going up for his final examinations, and one that is worthy of a place upon the bookshelf for future reference.

The author and publishers are to be congratulated on the high quality of the X-ray photographs,

and our only criticism is that the subsections in the index are not allotted separate lines. We feel that this small matter could be put right with advantage in future editions, of which we feel there will be many.

J. J. D.

Principles of Full Denture Prosthesis. By E. WILFRED FISH, M.D. (Manch.), D.D.Sc. (Melb.) D.Sc. (Lond.). Published by Messrs. John Bale, Sons & Curnow, Ltd. Third Edition. Pp. 116, 48 Illustrations. *Price* 12*s.* 6*d.*

THIS is the third edition of the book by Dr. Fish on full denture prosthesis. Very little comment is needed, except that it is as excellent as the other two editions.

In this edition the text is printed on both sides of the paper, instead of on one side as was the case in the previous edition. The stereoscopic photographs are no longer loose in an envelope, but are now bound in with the other diagrams and plates, and all are placed at the end of the book. These are definite improvements.

The building of both upper and lower dentures is carefully described under the headings of: (1) The Occlusal Surface, (2) The Polished Surface, (3) The Impression Surface. All three surfaces are important, but the polished surface is perhaps the most interesting, and has as its maxim the utilisation of all available space.

Whilst all the points raised may not be accepted by some, there is no doubt that Dr. Fish has crystallised the knowledge of full denture construction. Dentures made to the plan laid down will undoubtedly please and be more comfortable and efficient than dentures made to an untheoretical and haphazard technique.

All concerned with full denture prosthesis should read this valuable and well-written book.

A Manual on Dental Metallurgy. By ERNEST A. SMITH. Published by Messrs. J. A. Churchill, Ltd. Fifth Edition. Pp. 320, 15 Illustrations. *Price* 12*s.* 6*d.*

THIS is a very complete manual on dental metallurgy, and can be thoroughly recommended to the dental student who is about to sit for his examination. It can be recommended also to the practitioner as the many advances made recently are included in this work.

There are good chapters on the dental amalgams, the dental golds, stainless steel, chromium and tantalum and the non-metallic denture bases.

Works of this character usually present difficult reading, but in this case the material is well arranged and interesting.

Mr. Smith's book has long been recognised as a standard work on dental metallurgy, and this new edition should establish it still more firmly.

Correspondence

Free Speech

To the Editor of the GAZETTE

SIR,—Where can we expect to find the right to free speech in this country if not within the "limited community" of its largest University? Some years ago the vice-chancellor of another well-known English university attempted to curtail the long-accepted privileges of its undergraduates to express publicly whatever political opinions they held, with results very different from those he anticipated.

Fortunately, there are to-day sufficient people in England who, whatever may be their own political opinions, are prepared to express quite clearly their attitude towards the limitation of freedom of speech for others, and who do not approve of the driving under cover of political activities that experience has shown to be best left to flourish or wither in the open.

And finally, Mr. Editor, are you quite sure that it is politics at Guy's that you are deploring, and not the threatened introduction of other politics than your own?

Yours, etc.,

G. PAYLING WRIGHT.

47, Gordon Square,
W.C.1.

(*** We have referred to this letter in "Passim."—*Ed.*)

Rugby

To the Editor of the GAZETTE

SIR,—As a follower of Guy's rugby I cannot help feeling slightly upset by the letter appearing in your last issue from one "Spectemur Agenda."

The writer's criticisms are bitter, and although unfortunately partially true with reference to results, he fails entirely to grasp the fundamental fact, that is, that it is the lack of talent rather than an "abundance" that exists. A discussion on the cause of the diminished number of first-class players entering the Hospital is neither appropriate nor desirable at present, but the fact

remains that the Hospital XV does not contain as many "made" Varsity and South African players as it used to contain. This naturally makes the task of the Captain and his fellow-selectors correspondingly more difficult, because he not only has to find players whom he hopes will be able to hold their own in first-class rugby, but he has frequently to play them in strange positions for which he has no regular player.

The question of "scouts" to watch the Junior Teams has always been a difficult matter. Should the Captain spend his Wednesday afternoon (the only available day) watching the "A" XV, or should he concentrate on training the 1st XV? Perhaps if he is a super-man he can do both. Add to this the fact that he is usually doing busy Hospital appointments and in the throes of his Finals, and one sees that his task is not enviable.

There appear to me to be two reasonable methods of selecting the team :—

a. To have two or three non-playing "scouts" who really know the game and who are keen enough to watch matches regularly and could, therefore, be a real help in the selection of the Senior Teams. This appears to me to be the ideal method, but knowledgable people who have the time to spare are not easy to find.

b. To hold a meeting of the Captains and Secretaries of all teams early in each week, at which outstanding players can be promoted to the teams above.

Finally, I would like to put in a plea for more enthusiasm from Guy's men. During my recent visits to Honor Oak Park I have been struck by the lack of support from the more junior members of the Hospital. It is a joy to see several die-hards of the senior staff, who I know are generally interested in the team, and also some old Guy's men who take every opportunity of watching Guy's even though there may be better matches elsewhere.

If the younger element realised what a stimulus their support could be to the players they might turn out in greater numbers, and I can assure them that, if the Rosslyn Park match be any criterion, they will see no "ballet-dancers' tackling," but a magnificent defence and a grand game.

Yours, etc.,

J. E. GIESEN.

Queen Charlotte's Maternity Hospital,
N.W.1.

To the Editor of the GAZETTE

SIR,—I have read with interest and approval the letter signed by the officials of the Hospital Rugby XV and published in the ast issue of the *Gazette*.

As I see it the whole question of Guy's rugger depends on paragraph 2 of this letter, which states that Guy's no longer attracts promising and first-class rugby players. This, I maintain, is because certain other hospitals continue to offer Games Scholarships, which are bound to attract not only the first-class rugby player, but also his friends. It is a well-known fact that the successful candidate is often accompanied by three or four of his friends, who may be very useful players.

Unless the offer of these scholarships becomes universal, the rugby player will gravitate to those hospitals which will help him, in more ways than one, to qualify.

Yours, etc.,

WINDSOR LEWIS.

56, Trumpington Street,
Cambridge.

Rugby "B" XV

To the Editor of the GAZETTE

SIR,—The final paragraph in "Passim" of the last number of the *Gazette* led me to journey to Warlingham to watch the match between Guy's "B" XV and Warlingham "A" XV on 20th November last.

For the modest price of two shillings I obtained a ticket to Warlingham.

What, after the letter from noted footballers at Guy's was a duty, became a pleasure. To get some air on the top of a Surrey Hill took years off my life. The dressing accommodation on the side of the football field was adequate, and the enjoyable tea, price ninepence, was most welcome after the match, especially as it was served by most charming ladies of the neighbourhood. I had during the match the pleasant companionship of an injured footballer.

What about the football? I saw no slacking by anyone, though some were—shall I say?—in better training than others. The full-back was excellent, but I am told that he is a centre three-quarter usually, and it occurred to me that perhaps a kick would have been more advantageous than the initiation of a passing movement just in front of his own goal line.

But then I am very old-fashioned.

Lewin at centre three-quarter was very good and also the two halves. I noted one forward who put in a great deal of work, especially at the touch-line, and I did not see a single man failing to do his work in the scrum, although my football companion on the touch-line thought otherwise.

But, Sir, I did not see a single tackle, nor any picking up of the ball at the feet of the opposing forwards. Is it possible that attack is better than defence in these days?—not degenerate days, mark

you, for all the members of the team had forgotten more than I ever knew about Rugby football. But are good tackling and picking up of the ball really of no value?

Nevertheless, Guy's need not be very fearful in anticipation, if all those who take part in Rugby football at the Hospital play as well as did "B" XV against Warlingham. The score was eight points all.

There is in this connection great significance in the study of a good slide of the discharge due to a certain disease. Note how (as the Professor of bacteriology would say) the cocci concentrate before they get to the cell (in our case, football) and how they separate after they have dealt with it.

Just as footballers may learn about Rugby football from the study of such a slide, so some of those who are for ever waving themselves round patients might learn much of human nature from a close study of this great game.

I dare not sign my own name. My last match for the fourth fifteen was thirty years ago. How I wanted to be playing with the "B" XV on November 20th, 1937!

Yours, etc.,
"TRAGUS."

(P.S.—"B" XV *v.* Brentwood, 27th November. —The forwards packed exceedingly well, but the following up was poor. If this had been better the forwards might have scored twice. Manning and Ripman played well individually, but lacked somehow in combination. The full-back was excellent, and saved his side frequently by good catching of the ball and kicking. Result.—Lost, six points to eight.)

A Letter from Spain

(We publish the following letter sent to us from a member of the Staff as being of interest in showing that scientific work is still being carried on in the face of the difficulties of civil war.)

My dear Colleague,—December 14th will be the twenty-fifth anniversary of the first scientific session of the "Societat de Biologia de Barcelona," an affiliation of the Paris "Société de Biologie."

It will not be possible for us to celebrate this Silver Jubilee with such solemnity as we would have desired, but we shall not let it pass unnoticed in so far as the difficulties of the present situation will permit. We therefore earnestly request you, who have always taken so much interest in our "Societat de Biologia" and in its members, to send a few lines to our Secretary before December 1st.

These lines will be read at the plenary session that is to be held on Jubilee Day. We shall greatly appreciate your kind co-operation in this respect.

Thanking you, and with kindest regards, we beg to remain, dear Colleague,

Sincerely yours,
A. PI SUNER.

Barcelona,
Spain.

Appreciation

To the Editor of the GAZETTE

SIR,—The enclosed was presented to me with much blushing and confusion a day or two ago. You might be interested and publish it (with the heading anonymously, please, for my sake). The authoress is M. H., æt. 8 yrs. 11 mths.

Yours, etc.,
ANON.

Dental Dept.,
Guy's Hospital,
S.E.1.

"*To Mr.* ——

"1. Every time I come to Guy's
I've a sparkle in my eyes,
For I know that you will be
Ready there to welcome me.

"2. I do not mind the snow or rain
If I'm to see you once again;
I know that you will smile and say:
'Hallo! you're here again to-day.'

"3. And when I sit down in the chair
I really haven't a single care,
And when you give me that filling to mix
I'm up to all my pranks and tricks.

"4. And when from Guy's you disappear
I know that I shall shed a tear,
And you I'll always long to see,
Because you were so kind to me."

Buchmanism

To the Editor of the GAZETTE

SIR,—May I refer to Mr. John Tucker's letter on the above subject in the issue of the *Gazette* of November 20th, or, more precisely, to your remarks appended to it.

Your remarks lead me to believe:—

a. That you are satisfied with yourself and the results you obtain in dealing with your personal problems.

b. You regard the present condition of the world in general as satisfactory, and that further improvements are unnecessary or impossible of attainment.

c. Or that the "revolution" has already been started and completed in you.

I may add that I owe a great debt of gratitude to the Oxford Group, and further that I do know that all they say is possible, as I myself personally experienced.

But it requires courage and effort, and both these assets are required in all things worth while, even when studying Medicine or Dental Surgery, and should therefore be attributes of all Guy's men.

What a pity more don't make use of them!

Yours, etc.,

W. E. NELSON.

21, The Mount,
Shrewsbury, Shropshire.

(*** We have remarked on this letter elsewhere. —*Ed.*)

Sport

Rugby

Guy's v. Birkenhead Park

Played at Liverpool on Saturday Nov. 13th.

THE Hospital were compelled to travel north with a weak pack and were overwhelmed by 6 placed goals and 7 tries (51 points) to nil. Birkenhead Park were at full strength, and in the first minute a fine forward rush carried them into Guy's 25 and, following a scrum five yards from the line, Bibby, the fly-half, went over the line for a try near the corner.

After Allen had relieved another dangerous situation, Kynaston intercepted a passing movement and Guy's made their first attack.

Steytler made a good individual effort, but Steel, who was in great form, managed to obtain possession and eventually Bibby shot out a long pass to Holden, who ran on and gave Hancock a clear run in for a try, which Hodson converted.

Allen was playing a good game for the Hospital and was kicking well. However, the Park were very well organised, and their perfect machinery found gaps in the Hospital's defence. A penalty relieved the pressure, and Steel looked certain to score, but a wild pass gave Guy's the advantage.

Although Guy's defended valiantly, they could not stop another good movement which started when Shennan intercepted and gave Wilson an easy try near the posts. Hodson kicked another goal, and almost from the kick-off Knowles nearly crashed through on his own, but a free kick brought temporary relief to Guy's.

Near the interval, Owens obtained an unconverted try, and immediately afterwards Guy's broke away and made their way to Birkenhead's 25, but Hodson kicked clear. The Park followed up and Wilson scored another try, and Hodson added the goal points.

The Park started scoring again immediately after the resumption, and after a sharp bout of passing, Slater crossed for a try, and five minutes later Arthur scored a try, but Hodson failed to convert both.

Guy's were now a well beaten side, and further tries were registered through Holden (2), Buckley, Steel, Hancock and Owens, three of which Hodson converted.

Team.—R. D. Allen; D. M. Douglas, R. U. F. Kynaston, J. van A. Steytler, A. B. Baxter; J. P. Crawford, T. H. Eustace; J. P. Rochford, E. S. Nicholson, H. H. Crabb, D. W. Burnford, J. R. D. Williams, R. O. Yerbury, F. R. Turner, G. P. A. Sechiari.

Guy's v. Rosslyn Park

Played at Honor Oak Park on Sat., Nov. 20th.

GUY'S showed a welcome and remarkable return to form when they met Rosslyn Park at home, and, after a thrilling game, were unfortunate to be defeated by a placed goal and a try (8 points) to a penalty goal (3 points).

Following their heavy reverses in recent matches it came as a pleasant surprise to the Hospital supporters to see their team not only holding their own but time after time initiating attacks which should have produced at least two tries.

Unfortunately for Guy's, they found P. F. Cooper, the Park full-back, at his best, and time after time he saved his line when either Dick or Allen had the line at their mercy. Cooper's tackling was superb, but, on the other hand, had the Hospital backs followed up and supported these efforts, the result might have ended differently.

The forwards worked hard and, although they were opposed to a heavier pack, they not only held their own in the set scrums, but were very lively and prominent in the loose.

Nicholson had a great battle with Seligman and the honours were even, but although Eustace and Allen played well, the Hospital back division, with one or two exceptions, could not make much impression on the excellent defence put up by Rosslyn Park.

The visitors went off with a rush and tried hard to obtain an early score, but the Hospital defence was magnificent.

Having weathered this early onslaught, Guy's settled down, and on two occasions Dick broke through, only to find no one up to take his passes.

Comyns, the visitors' stand-off half, was very elusive, and several of his breaks-through and kicks ahead threatened the Hospital line, but, having mastered these raids, Guy's retaliated and, following good work by Kynaston and Baxter, Eustace just missed a drop at goal.

After twenty minutes' play, the Park against the run of play took the lead, when Huxley, following a scrum in the Hospital's 25, dashed over for an unconverted try.

Near the interval Guy's started a passing movement a few yards from the line, but in trying to clear they were unfortunate to have another try registered against them when Cardew fielded a kick ahead by Dick, ran inside, passed to Unwin, and the latter crossed the line near the posts, for Huxley to convert.

Guy's opened the second half in amazing fashion and soon had the Park penned on their goal line. They started several movements, which the visitors managed to frustrate, but eventually Guy's were awarded a penalty for offside, and Dick kicked an easy goal.

The Hospital continued to hold the upper hand, and first Dick and then Allen burst through the centre with no one to take a scoring pass.

Another good movement between Kynaston and Douglas only failed by a yard, and once again Cooper proved the stumbling-block.

A ding-dong struggle followed, but although the Park were awarded an easy penalty for a scrum infringement, they failed to add to their score, and in the closing minutes Guy's pressed continuously.

It was a thrilling finish, and the Hospital were unfortunate not to score.

Team.—J. P. Crawford; A. B. Baxter, R. C. S. Dick, R. U. F. Kynaston, D. M. Douglas; R. D. Allen, T. H. Eustace; H. H. Crabb, E. S. Nicholson, J. P. Rochford, J. R. D. Williams, D. W. Burnford, G. P. A. Sachiari, K. A. Stanyon-Jaques, F. R. Turner.

Rugby Fives

Guy's v. St. Bart.'s

Played on Tuesday, November 2nd

ON November 2nd, a very strong Guy's team beat St. Bartholomew's Hospital at Charterhouse Square by the comfortable margin of 109 points to 79. Neustatter and Chase won every game, and Lane and Baelz all but one game.

Result.—For, 109; against, 79.

Team.—O. H. E. Baelz (captain) and O. G. Lane. W. L. Neustatter and C. H. G. Chase.

Guy's v. St. Dunstan's College

Played on Wednesday, November 16th

ON November 16th Guy's lost to St. Dunstan's at Catford by 41 points. Macdonald and Stephens were eight points down on the first three games, and 22 points on the second three, while Southwell and Smith were 11 points down on the whole six games.

Result.—For, 127; against, 168.

Team.—I. M. Macdonald and J. W. Stephens, 15—11, 5—15, 15—17; 9—15, 1—15, 12—15. W. B. B. Southwell and H. D. Smith, 15—13, 2—15, 8—15; 15—11, 15—13, 15—13.

GUY'S v. OLD MERCHANT TAYLORS

Played on Wednesday, November 24th

A VERY good match against the Old Merchant Taylors on Wednesday, November 24th, at Charterhouse Square was narrowly won by the Hospital, mainly due to fine play by Baelz and Chase in the two singles games which preceded the doubles. In the doubles, Neustatter and Chase won three of their four games, and Baelz and Macdonald, although six points up on the first two games, collapsed and dropped 27 points on the last two games.

Team and Scores.—Singles: C. H. G. Chase, 15—1; O. H. E. Baelz, 15—7. Doubles: C. H. G. Chase and W. L. Neustatter, 8—15, 16—14, 15—8, 15—3; O. H. E. Baelz and I. M. Macdonald, 15—16, 15—8, 0—15, 3—15.

Points.—For, 117; against, 98.

Association

GUY'S v. OLD CHOLMOLEIANS

AT Honor Oak Park on Saturday, November 13th, Guy's gained another overwhelming victory by defeating the Old Cholmoleians by 6 goals to 1.

Winning the toss, Guy's started off in an amazing way; they swept down the field and scored almost immediately, Dorr putting in a high drive from outside the penalty area.

Straight from the restart Harvey, making his first appearance this season, ran right through the opposing defence and then passed almost along the goal-line to Dorr, for the latter to score a second goal. The Old Cholmeleians seemed completely bewildered by these lightning attacks, and before long Sprigings scored a third goal for Guy's.

Following this, Hurst, after beating several men, scored yet another goal from a narrow angle—four goals up in less than ten minutes!

The Old Boys then rallied somewhat, but Guy's, finding their man with first-time passes, continued to dominate the play, and Hurst soon scored again, to make it 5—0. The Old Cholmeleians got their one goal a second before half-time, the centre-forward diving headlong to convert a centre from the right wing.

After the interval, the Hospital's play deteriorated badly, as is usually the case when a side has a commanding lead. The forwards made the mistake of adopting the short, close game and failed to work together as a line, individualism being far too much in evidence. In so doing, they lost their former thrust, and only scored one further goal, Dorr taking advantage of a narrow opening and putting in a ground shot.

It is hoped that Guy's will benefit from this match by realising the sound policy of playing what is called the "open" game combined with long first-time passes.

Team.—H. P. Stebbings; J. M. Thomas, B. M. Heap; J. Jones, G. M. Pearson, H. A. Lee; R. W. Harvey, L. James, G. W. Dorr (captain), A. Hurst, G. C. Sprigings.

GUY'S v. BART.'S

ON Wednesday, November 10th, Guy's were invited to play a match against Bart.'s on the occasion of the official opening of Bart.'s new sports ground at Chislehurst.

Their proper soccer pitch not yet being fit for play, the match took place on a temporary ground, but the field was found to have an extremely good playing surface and, despite a rather troublesome wind, Guy's soon settled down to play a really sound game.

They at once adopted the open game, characterised by those dangerous long sweeping passes, and soon gained the upper hand. Within five minutes, Sprigings, taking a perfect pass from Hurst, opened the scoring with a fast cross-shot.

Guy's continued to attack, and the forwards, combining well and plied with cleverly judged passes from their halves, time and time again caught the Bart.'s defence out of position. Dorr after heading a centre from Sprigings against the cross-bar, scored Guy's second goal and, ten minutes later, the same player robbed a Bart.'s defender of the ball and netted another goal from close range.

At this stage Heap, the Hospital left-back, was injured, and for the rest of the game played on the right wing. This necessitated a change-over in the defence, Lee falling back and Drew moving across to left-half. However, this in no way upset the splendid play of the defence, who throughout the game were complete masters of the Bart.'s attack.

Half-time came with the score at 3—0, and after the interval play was practically confined to Bart.'s half. With twenty minutes of the second half gone, Dorr ran through to complete a "hat-trick," and towards the end, after Heap had just missed with a drive from twenty yards out, Dorr again scored to give Guy's their fifth and final goal.

Guy's are to be congratulated on playing what was undoubtedly their best game of the season so far, and we thank Bart.'s for a really enjoyable match.

Result.—Guy's, 5; Bart.'s, 0.

Team.—H. P. Stebbings; J. M. Thomas, B. M. Heap; J. Jones, G. M. Pearson, H. A. Lee; D. W. Drew, L. James, G. W. Dorr (captain), A. Hurst, G. C. Sprigings.

Hockey

Guy's v. Aldershot Command

THIS match is probably our strongest fixture, and this year resulted in a victory for the Command by 3 goals to nil. Both teams were strongly representative, and the game was thoroughly enjoyable.

The effect of the many easy victories which the Hospital team has experienced lately was seen in the opening half, when the quick accurate passing and interception of the Command made the Guy's team appear rather lackadaisical. We have not been accustomed to playing against such excellent teamwork, and it consequently took us some little time to adapt ourselves to the quicker game.

Great improvement in this direction was seen in the second half, but the comparative slowness and lack of positional play of the Guy's team was in evidence to the end. It is hoped that in future years the season will not commence with so many easy matches, since this certainly has a bad effect on teamwork.

The Command attacked from the start, and nearly scored in the first minute, but Guy's missed an easy chance of going ahead a little time later. The Command had by far the better of the first half, the Guy's attack being well held. Leeming played excellently at centre-half, but the backs were not so steadly as usual, Thorne in particular having a lot of work thrust upon him because of the inability of the left-half to hold the fast Command winger, possibly because it is impossible to tackle and hit with one hand. At the interval we were 3—0 down, with the Command well on top.

Our showing in the second half was much more encouraging, and we had a fair share of the play. The defence throughout played excellently, and the forwards were quicker on the ball. We were unlucky not to score on several occasions from direct attacks, as well as from a number of short corners. A penalty bully was also unaccountably missed.

Our outstanding player was Leeming at centre-half. He did a lion's share in the defence, and it was unfortunate that the inside forwards did not position themselves better for his passes. The defence (with Buck at left-half in the second half) played well, but the forwards were disappointing. If a lesson is to be learnt from this game, it is this : be quicker, and position yourself for the pass. When you get the pass, take care in passing yourself, and be sure to pass it to one of your own men. How often does one see an opponent simply awaiting the pass which is meant for the man he is marking !

Team.—E. J. A. Needham ; J. S. Astbury, T. C. Thorne ; E. Smith, J. A. L. Leeming, H. A. Buck ; B. M. Cox, A. C. Greene, E. J. Martin, S. G. McCallin, J. B. Franklin (captain).

Other results were as follows :—

Sat., Nov. 6th.—Nore Command. Won, 10—3.
Wed., Nov. 10th.—Aldershot Command. Lost, 0—3.

Ice Hockey Club

UNITED HOSPITALS v. OXFORD UNIV.

ON Sunday (14th November) the United Hospitals' Ice Hockey team opened their season by playing Oxford University. The match was played at Harringay Arena, our home rink.

The fact that the result was a draw, each side scoring one point, will convey nothing of the game, except, of course, that nobody won. But forget that. What is good news is that the game was played out in good spirit by both sides and made extremely good watching. The standard of play having greatly improved, is now worth a little stronger support.

The entirely different tactics used by the two hospital lines was rather striking. The Guy's line was always playing an offensive game, which incidentally showed great promise, and by this means kept the puck well up in the Oxford's defence area. The St. Thomas's line, on the other hand, played a very deliberate defence game, which, mind you, they did very well, but the manœuvre became just a trifle hazardous at times.

The two goals I spoke of before were both scored in the first few minutes. The home goal was scored by Slater (St. Thomas's) from an assist by Bromley (Guy's). It seems remarkable that the Hospitals should score the first goal, but this was definitely the case !

This may be just a primary spasm, but it certainly put the opposing team on the offensive, which, of course, is a bad thing. Still, it is unfair to pick holes in such a fast and splendid performance.

Team.—— Henderson (St. Thomas's) ; — Moslet (St. Thomas's), T. Bromley (Guy's) ; Capt. H. de Wardner (St. Thomas's), H. Vyse (St. Thomas's), J. Slater (St. Thomas's) ; — Stoner (Guy's), J. Head (Guy's), I. Ross (Guy's) ; 10th man, — Manifold (St. Thomas's).

I should like to point out that the next few United Hospitals' matches will be played away. But watch the notice-boards. One day next month there will be a match at home ; it should prove just as good to watch.

DURING the week-end two more matches were played. The first, on Saturday evening (20th) at the Alpine Rink, Wembley, the other on Sunday morning (21st) at Harringay Arena.

The Alpine Rink proved to be rather smaller than anything we have played on before and caused rather chaotic play from both sides. Our opponents, the Wembley Aces, appeared to be on rather bad terms with the referee, for once or twice one of their side was sent off for no apparent reason. This gave us the chance to win our first match this season, the score being 5—1.

On Sunday morning, against the Richmond Redwings, the play became better than on the previous evening. At times the combination showed possibilities, but was again spoiled by a few outstanding mistakes, or, shall we say in-

accuracies? it sounds better. If these faults had not been made we might have made a better show, although their superior speed gave them a good pull. The resulting score was only kept down by sheer grit, the Hospital losing for a modest 3—0.

Team.—I. Ross, J. Head, G. Hancock; — Ticehurst, J. Lee, J. Stoner; P. Bromley, H. Hall; B. M. Cox. Tenth man, — Cushing.

I. W. R.

Golf

GUY'S entered the final of the Inter-Hospitals Golf Cup by beating London Hospital at West Hill Golf Club on Thursday, 18th November, by 6½ points to 5½.

We gained a lead of two points in the foursomes before lunch, but in the afternoon began by losing the first four singles. Fortunately, however, the tail wagged just the required amount, and S. M. Whitteridge finally won us the match, with his last putt, by the narrowest of margins, and so averted a replay.

Results were as follows :—

Guy's		*London*
FOURSOMES		
B. C. M. Reed & I. Drybrough-Smith	0	R. C. Southern & J. D. H. Iles (4/2) 1
G. G. France & P. Wilson (6/5)	1	I. C. B. Pearce & J. Walker 0
J. C. Ritchie & T. N. Praat (5/4)	1	P. Dick & J. F. Walton 0
S. M. Whitteridge & P. D. Spooner (6/5)	1	R. K. I. Kennedy & J. E. C. Jones 0
Total	3	Total 1
SINGLES		
I. Drybrough-Smith	0	R. C. Southern (2/1) 1
B. C. M. Reed	0	J. D. H. Iles (1 up) 1
G. G. France	0	I. C. B. Pearce (1 up) 1
P. Wilson	0	J. Walker (4/3) 1
J. C. Ritchie (3/1)	1	P. Dick 0
T. N. Praat (5/3)	1	J. F. Walton 0
S. M. Whitteridge	½	R. K. I. Kennedy ½
P. D. Spooner (3/2)	1	J. E. C. Jones 0
Total	3½	Total 4½

Hospital Information, etc.

Nursing News

WE would like to congratulate Miss R. C. Shackles, Miss D. Kay and Miss D. M. Barber on their success in recent examinations. Miss Shackles, 2nd Assistant Matron, has obtained the Diploma in Nursing of the University of London in the subject of Hospital Administration.

Miss Kay, who was Sister in Victoria Ward until a few months ago, and Miss Barber, Staff Midwife of the Maternity District, have obtained the Midwife Teacher's Certificate of the Central Midwives' Board.

Pass List

UNIVERSITY OF CAMBRIDGE.

Bachelor of Medicine and Surgery.

A. Cursham
G. E. Yardley
C. H. C. Ferguson

SOCIETY OF APOTHECARIES OF LONDON.

FINAL EXAMINATION.

November, 1937.

Surgery.

*H. D. Lamb.

Medicine.

*J. D. Buckner
*R. A. Stenhouse
*H. D. Lamb

Forensic Medicine.

*J. D. Buckner
*R. A. Stenhouse
*H. D. Lamb

* Have now completed the examination.

Papers by Guy's Men

Gavin Thurston. Subarachnoid hæmorrhage simulating "acute abdomen." *Lancet*, 1937, ii, 1194.

A. Bowen-Davies. Otitic meningitis. *Ibid.*, 1195.

Archibald D. Marston. The administration of anæsthetics for dental operations. *Brit. Dent. Jour.*, 1937, lxiii, 569.

C. P. Blacker. Eugenic problems needing research. *Eugenics Review*, 1937, xxix, 181.

W. G. Gill. Diaphyseal aclasias. *Proc. Roy. Soc. Med.*, 1937, xxxi, 11 (Clin. Sect.).

R. W. B. Ellis. Precocious puberty in a female infant. *Ibid.*, 13 (Clin. Sect.).

R. S. Handley and Another. Sarcoma of the Uterus. *Lancet*, 1937, ii, 1246.

Appointments

W. H. Grace appointed External Examiner in Forensic Medicine in the University of London.

Changes of Address

H. R. Mullins, Clater Park, Bromyard, Herefordshire.

J. W. Schabort, 33, West Street, Lower Houghton, Johannesburg.

F. McCombie, Caterstone, Wimborne, Dorset.

Dr. C. A. Clarke, 65, Warwick Square, S.W.1. *Victoria* 0647.

Birth

MARTIN.—On November 25th, 1937, at Allington House Nursing Home, to Marjorie, wife of Leonard Martin, L.D.S. R.C.S. (Eng.), 16, Northgate, Ipswich—a son.

Death

PARTRIDGE.—On October 14th, 1937, A. A. H. Partridge, M.A., M.D., of Ashtead, Surrey.

EDS. {H.B.O.C. C.H.E.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LI — *18th December 1937* — *Number 1289*

PASSIM

THE *Gazette*, contrary to the opinion which we have often heard expressed, is not a students' journal, for it reaches a far wider public than is contained within the confines of the Hospital, and indeed only a small minority of its readers work at Guy's. The majority are scattered far and wide, both in place and in occupation, and have one thing only in common—their affection for this Hospital.

It is with this common denominator in mind that we write this week, for what we have to say here—to emulate the style of a much-read contemporary " daily "—concerns *you*. Whether you are a first-year student, a Governor of the Hospital, a member of the Staff, a dentist in Balham or a titled consultant in Harley Street is of small matter for what we would write about is your particular concern.

Two years ago an appeal was launched by the authorities to raise half-a-million pounds to replenish " the Guy's Treasure Chest," and that appeal, although its goal is far from being attained, has met with a considerable measure of success. One of the principal objects of the appeal was to raise the necessary funds for the rebuilding of the Surgical Block, which is over two hundred years old and is in urgent need of reconstruction along more modern lines. Considerable speculation has been rife as to how this reconstruction could be achieved within the spatial limits imposed by neighbouring buildings and streets, but this speculation has been mostly of an idle character since the consummation of the scheme seemed so far from fulfilment. We are now informed that a plan is shortly to be submitted to the Rebuilding Committee for the demolition of the present Surgical Block and construction of a new Surgical Building. We do not know any of the details of this plan except in one very important particular, namely, that the scheme would entail the entire demolition of the existing entrance to the Hospital, the Quadrangle and buildings which constitute it.

This Quadrangle is an example of the elaborations which were brought about in the earlier and severer type of early 18th-century architecture, and which resulted in the full flower of the later Georgian style which may be seen as well in the magnificent terraces at Leamington, Cheltenham and St. Leonard's.

It will be appreciated by the least æsthetically-minded that we have at Guy's an architectural masterpiece of which we may well be proud. Apart, however, from its artistic merit the Quadrangle and Colonnade embody for us all in a special sense the idea of Guy's. No one would, we feel, shed a tear if it were decided to-morrow to reconstruct the whole remainder of the Hospital. It is difficult to see why this should be so, since, with the exception of Nuffield House and the new Pathology Block, all the buildings antedate our memories. Nevertheless everyone will agree with us that to Guy's men Guy's is the original building, and our feelings and instincts are naturally affronted by the idea of replacing it by a modern building, however fine.

Unfortunately, in this modern world of ours we are constantly required to sacrifice to convenience and utilitarian motives that certain dignity and spaciousness which our forefathers managed to incorporate in their most practical architectural efforts. Greater London is a monument to our sacrifice—modern Regent Street the result. No one to-day, it seems, can resist the appeal to necessity. We would not, however, have our readers associate us with those who make a cult of the old and purely decorative, for we in no way subscribe to the view that the æsthetic has a priority over the useful and humanitarian. The two are happily not always inconsistent, and when they are we would not wish to press too strongly the claims of the former. Nevertheless in the case of the projected rebuilding scheme we are not yet convinced that the sacrifice of the one to the other is a necessity.

That we need a new Surgical Block is contested by few. It is true that a senior surgeon of this Hospital has been heard to remark that we obtain at Guy's as good surgical results as anywhere else, and that he can see no reason why the reconstruction should be undertaken. The present conditions are, however, far from admirable, and to mention but a few will suffice. The top floor wards are veritable garrets, the operating theatres inadequate and badly placed, the facilities for transport are frankly ludicrous in their insufficiency, the cooking and garbage arrangements are inconvenient, to say the least. Finally there is the all-important argument that the present number of beds must be increased. No, we think that it can be admitted without a quibble that Guy's stands in pressing need of a new Surgical Block. The only question is how this may be best achieved, and while we speak without any information regarding the problems and difficulties involved, we believe from a theoretical standpoint that there are only three possible courses of action :—

1. To adapt the present building to the new needs, while retaining the present structure.

2. To demolish the present block while maintaining the facade of the Quadrangle and to construct behind it a building in keeping with its architectural period.

3. To demolish the entire Front Quadrangle and to build an entirely new block.

There may, perhaps, occur to one of our readers a fourth alternative, but we have been unable to think of one.

Of the courses of action enumerated the first may be quickly dismissed. The small improvements which could be thus obtained would be gained at a prohibitive cost, since the existing building could not possibly support any more weight without the provision of a new foundation for the Block.

The choice therefore must rest between the other two alternatives, and we confess that it would be impossible for us or for anyone else to decide which is the wiser course to adopt without the full facts for consideration. We would, however, advance the following proposition : That under no circumstances should the destruction of the Quadrangle be even so much as contemplated until every device and ingenuity at the command of the best architects in the land towards its retention have been exhausted.

That many difficulties would be encountered in an architectural scheme which aimed at grafting a new building on to an old one is evident. These difficulties would, we feel, be overcome if such a scheme were the only possible one, and this we believe is the only spirit in which to approach the problem. The Georgian style of architecture is an eminently practical one, and depends mainly for its effect on the perfect proportion of its component parts and not on extraneous decoration.

Why should not the new block, built in Georgian style, arise behind the present facade set back, perhaps twenty feet ? It would not appear in any way incongruous if its style was in keeping with the period. We have asked an artist to illustrate this suggestion, and we print a rough pen-and-ink sketch incorporating this idea. Many other conceptions are obviously possible, and it should be possible to arrive at a scheme which would provide an up-to-date block and still preserve the essential architectural features of the Hospital approach.

This then is our view of the matter, and if we have chosen to raise this question now rather than to wait for fuller information, it is because we feel that we may be soon faced with the accomplished fact. We believe also that the issue is not a private one to be settled behind closed doors, but rather one on which every one of us, as a part inheritor of the Guy's tradition, should have the opportunity to voice his opinion before a decision is taken by the authorities. We have put forward our own views here, and will welcome those of any of our readers who, we hope, will write to us on the subject.

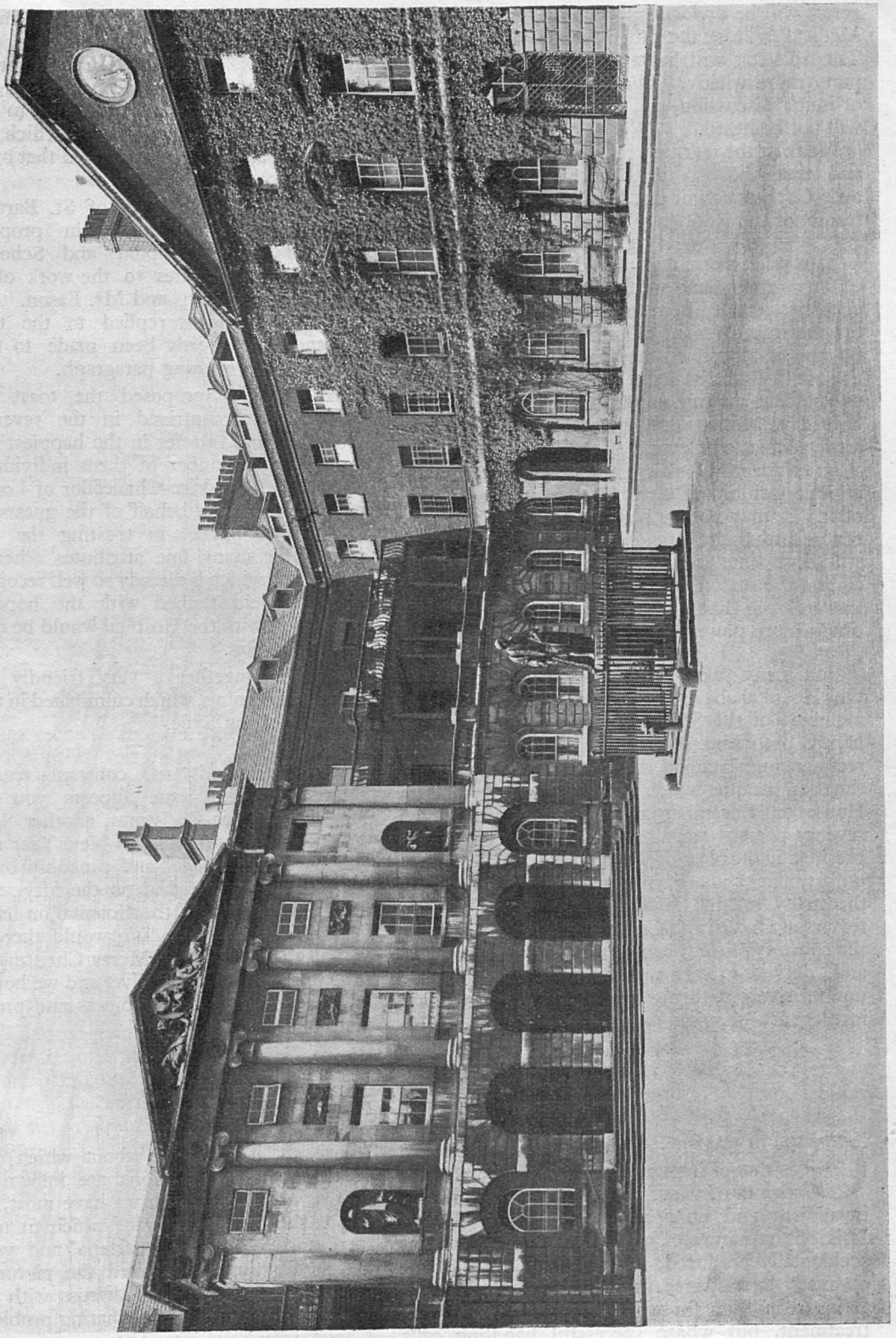
The Superintendent of the Hospital, speaking recently at a dinner of the Governors and Staff, expressed the opinion (rather ominously, we thought) that the Guy's spirit was expressed in the Hospital tradition of service and teaching rather than in its buildings. With this we wholeheartedly concur, and would willingly sacrifice all the buildings, good, bad and indifferent, to the acquisition of one Addison or one Bright. Nevertheless, the tradition of service and teaching is not going to be in any way improved by the demolition of what is fine and beautiful in the Hospital ; rather will it suffer, for in these days of bustle and so-called efficiency, when values of things are judged by whether they will save one a few minutes or seconds' work, it is good to have a reminder that our forerunners with no labour-saving devices at their disposal could still find time to set store by the fine exterior to their Hospital, which exterior was in some measure a reflection of the quality of their own minds.

▭

Our readers may remember our article in a recent *Gazette* in which we expressed our opinion of the " Niggers," and in which we made a plea for their abolition, or at least some radical reorganisation which would make them less of a menace.

At the Residents' Meeting it was decided that this year's entertainment would be less uproarious, and an attempt would be made to cause as little fuss as possible.

The most important change is that the " Nig-



gers " will be divided into two halves, one for the Medical Wards, the other for the Surgical side. This in itself will halve the noise and make the party more wieldy. The big drum was a source of much discussion, and it is still possible that it will not be heard.

We trust the rearrangement will prove a success, and that those patients necessarily in hospital over Christmas will not be too distressed by the results of the Residents' travail.

THIS week we publish more letters on the subject of Guy's rugby, and we note that this correspondence has already been productive of many ideas for the improvement of our rugger team. As if by way of a reply to the pessimism of its critics, the 1st XV girt its loins and proceeded to give a magnificent exhibition of first-class football last Saturday, beating the Army, and a rejuvenated army at that, by eleven points to nine.

If criticism of this nature can sharpen the athletic faculties of our team, let us have a spate of it. It may not be possible for us to diminish our record figure under " Points Lost," but we still have time to achieve the double record of ending the season with a higher number of points lost and *won* than any other team. In the meantime—more power to the team !

FOR many years in the past the Governors of the Hospital have entertained at intervals the members of the Staff and Schools. This year a happy precedent has been set and the former recipients entertained the Governors for the first time at a banquet which was held at the Dorchester House on December 2nd. Some hundred and seventy persons were present, and Lord Nuffield presided in the place of Viscount Goschen, who was unfortunately ill and unable to attend. Among the many notable guests were the Regius Professors of Oxford and Cambridge Universities. By the courtesy of the Dean we were invited to attend, and, decked in our sombre finery, we mingled unobtrusively with our superiors—in rank if not in elegance—hoping to procure for our readers one of those " scoops " which must always be dear to our journalistic hearts. Lulled, however, by hock, claret and " Fine Champagne," we failed to discover even the suspicion of a sensation to report, for everything proceeded to order, and the mellifluence of the speeches which followed a more than adequate meal rivalled that of the wines which accompanied it.

Mr. Girling Ball, Dean of St. Bartholomew's Hospital Medical School, in proposing the toast of " The Hospital and Schools," paid some moving tributes to the work of Professor Johnston, Mr. Evans and Mr. Eason. The Dean and Superintendent replied to the toast, and reference has already been made to the latter's speech in the opening paragraph.

Mr. Hughes proposed the toast of " Our Guests," and contrived in the seven minutes allotted to him to refer in the happiest manner to a very large number of them individually. Sir Robert Pickard, Vice-Chancellor of London University, replied on behalf of the guests. Finally, Mr. Lewin Payne, in toasting the Chairman, praised his many fine attributes other than his generosity, which is already so well recognised, and Lord Nuffield replied with the hope that his connection with the Hospital would be of long and happy duration.

It was altogether a very friendly and most successful evening, which culminated in the singing of " Auld Lang Syne."

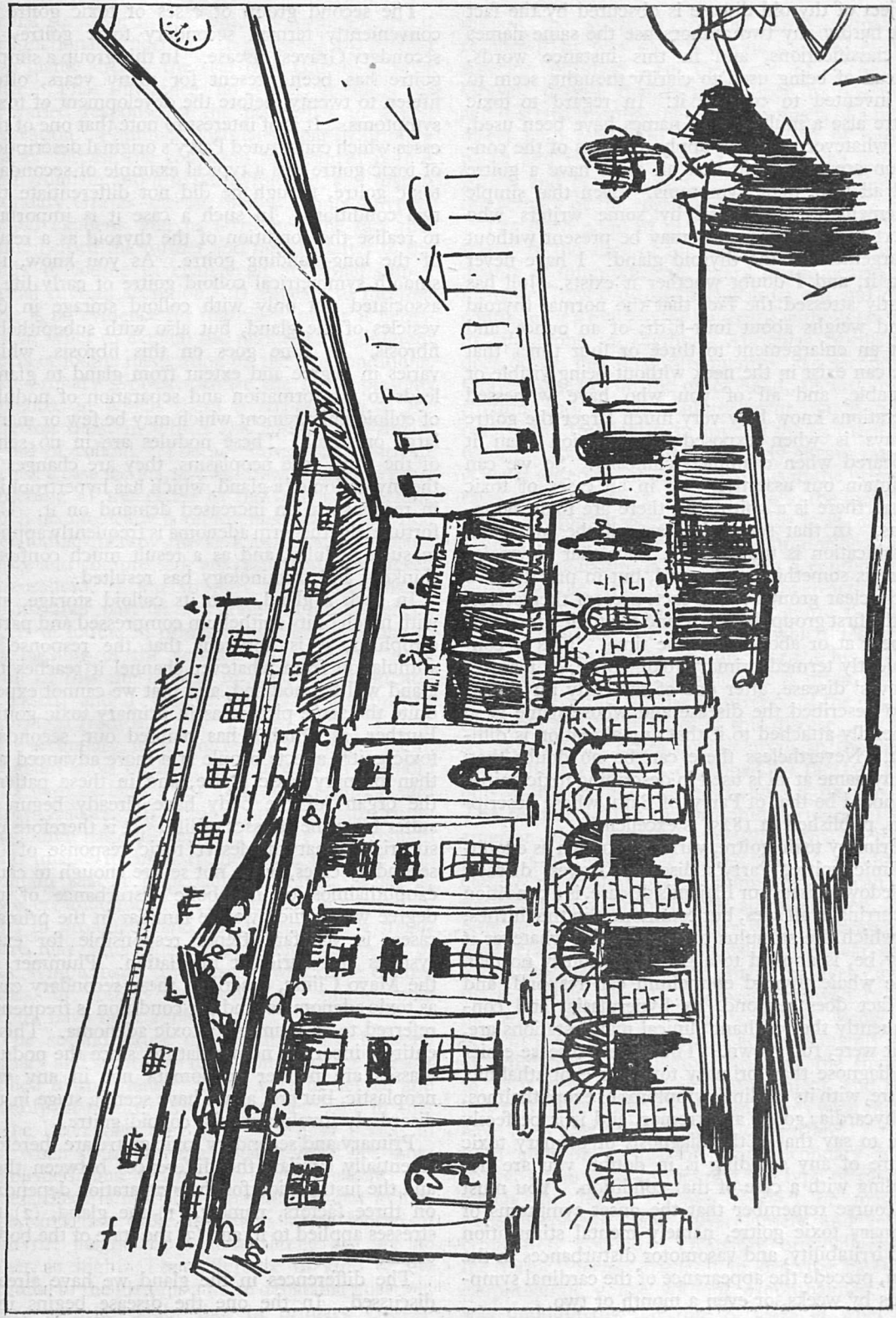
WHICH reminds us, constant readers, that before our next issue appears you will have survived another Christmas, another " Niggers " will be over, another set of New Year resolutions will have been made, and probably broken, and we shall have embarked on the fifty-second year of our existence, and the Hospital on its two hundred and eighteenth. We would therefore wish you all the Merriest of Merry Christmases in this mad vortex in which we live, and we hope that the New Year will bring happiness and prosperity to you all and to Guy's.

Toxic Goitre

A Clinical Lecture by E. G. Slesinger, Esq.

GENTLEMEN,—The subject of toxic goitre is one of immense importance from many points of view. It causes a great deal of invalidism and unhappiness and many deaths. It is of the nature of a physiological experiment accidentally produced, and its study throws light on many and diverse problems in many organs. It is a condition for which we can do much by treatment, but whose successful handling calls for a high level of clinical and technical judgment. Above all, it is a state about which an infinity of facts and observations are known to us, a jig-saw puzzle of which we have most, if not yet all, of the pieces, many of which fit together in clear and recognisable pattern, and yet no one has so far quite completed the picture. I can do no more to-day than discuss with you some general aspects of this fascinating problem which, I hope, may be of interest to you.

Firstly in regard to nomenclature. The whole



subject of thyroid disease is obscured by the fact that hardly any two authors use the same names or classifications, and in this instance words, instead of being used to clarify thought, seem to be invented to confuse it. In regard to toxic goitre also a multitude of names have been used, but whatever terms we apply the facts of the condition are simple, in that all cases have a goitre and all have toxic symptoms. Even that simple statement is challenged by some writers who assert that thyrotoxicosis may be present without enlargement of the thyroid gland. I have never seen it, and I doubt whether it exists. Joll has rightly stressed the fact that the normal thyroid gland weighs about four-fifths of an ounce, and that an enlargement to three or four times that size can exist in the neck without being visible or palpable, and all of you who have witnessed operations know how very much larger the goitre always is when exposed at operation than it appeared when examined clinically. So we can maintain our assertion that in all cases of toxic goitre there is a goitre and there are toxic symptoms. In that sense they are all the same and classification is unnecessary. For that viewpoint there is something to be said, but in practice two fairly clear groups do, in fact, present themselves. In the first group the goitre and the toxic symptoms appear at or about the same time. This is conveniently termed primary toxic goitre, or primary Graves' disease, after one of the early physicians who described the disease and whose name is so generally attached to it that any alteration is difficult. Nevertheless there can be no doubt that, if any name at all is used in describing toxic goitre, it should be that of Parry, of Bath, whose description, published in 1825, is excellent.

Primary toxic goitre, variously known as exophthalmic goitre, Parry's disease, Graves' disease, Basedow's disease or Flajani's disease, is a condition occurring at all ages, but commonest in the thirties, in which the stimulus to the thyroid, whatever it may be, is applied to a gland previously normal. The whole thyroid epithelium can respond, and in fact does respond, by hyperplasia, and consequently the resultant clinical manifestations are, as it were, full blown. There is no disease easier to diagnose than primary toxic, or exophthalmic, goitre, with its cardinal symptoms of exophthalmos, tachycardia, goitre and tremor, and it is perfectly safe to say that if the diagnosis of primary toxic goitre of any standing is in doubt, you are not dealing with a case of that condition. You must of course remember that the onset symptoms of primary toxic goitre, namely mental stimulation and irritability, and vasomotor disturbances in the skin, precede the appearance of the cardinal symptoms by weeks, or even a month or two.

The second group of cases of toxic goitre is conveniently termed secondary toxic goitre, or secondary Graves' disease. In this group a simple goitre has been present for many years, often fifteen to twenty, before the development of toxic symptoms. It is of interest to note that one of the cases which constituted Parry's original description of toxic goitre was a typical example of secondary toxic goitre, though he did not differentiate the two conditions. In such a case it is important to realise the condition of the thyroid as a result of the long-standing goitre. As you know, the smooth symmetrical colloid goitre of early life is associated not only with colloid storage in the vesicles of the gland, but also with subepithelial fibrosis. As time goes on this fibrosis, which varies in degree and extent from gland to gland, leads to the formation and separation of nodules of colloid enlargement which may be few or many, large or small. These nodules are in no sense of the word true neoplasms, they are changes in the involution of a gland, which has hypertrophied in response to an increased demand on it. Unfortunately, the term adenoma is frequently applied to such nodules, and as a result much confused thinking and terminology has resulted.

In such a gland, with its colloid storage, and with much of its epithelium compressed and partly atrophied, it is apparent that the response to stimulation from whatever channel it reaches the gland will be modified, and that we cannot expect quite the same picture as in primary toxic goitre. Further, as Dunhill has pointed out, secondary toxic goitre affects people at a more advanced age than primary toxic goitre, and in these patients the organs of the body have already begun to suffer from the stresses of life. It is therefore not surprising that the lesser toxic response of the secondary cases, while not severe enough to cause exophthalmos or metabolic disturbance of the degree with which we are familiar in the primary cases, is yet far oftener responsible for extra systoles and auricular fibrillation. Plummer, of the Mayo Clinic, described these secondary cases as toxic adenomata, and the condition is frequently referred to as Plummer's toxic adenoma. This is entirely incorrect nomenclature, since the nodular masses are neither adenomata nor in any way neoplastic, but are, as we have seen, a stage in the disorderly involution of a colloid goitre.

Primary and secondary toxic goitre are therefore essentially similar, the differences between them and the justification for their separation depending on three factors, namely, (1) the gland, (2) the stresses applied to it, and (3) the state of the bodily organs.

The differences in the gland we have already discussed. In the one the disease begins in a

normal gland, or in one which is histologically, if not functionally, normal. In the other it is grafted on a gland already the seat of a colloid nodular goitre. That difference, no doubt, accounts for the varied response of the two types to iodine medication. Plummer postulated that in primary Graves' disease the condition represented both a dysthyroidism and a hyperthyroidism, and that in secondary Graves' disease there was only a hyperthyroid element, and he attributed the fact that iodine helped the former and not the latter to the ability of iodine to change an abnormal into a normal thyroid secretion. It appears to me that there is no evidence for that view, nor is it necessary in order to explain the undoubtedly different effects of iodine medication on the two conditions.

In primary Graves' disease the gland presents a picture in which there is hyperplasia of the secreting cells, in which the vesicles are totally devoid of colloid. The administration of iodine in such a case results, as you know, in a remarkable hardening of the gland to the feel, a hardening which histologically is represented by the fact that after iodine therapy the vesicles, instead of being empty and compressed, are distended and packed with colloid. I am strongly of opinion that a considerable part at any rate of the beneficial effects of iodine in primary toxic goitre is due to this packing of the vesicles with colloid. As a result of this the tension of the gland is greatly increased, and I believe results in diminished absorption from it.

In secondary toxic goitre on the other hand, the gland is, as we have seen, already in a colloid state, with perhaps a few areas of hyperplasia and empty vesicles. It is not, therefore, surprising that iodine has little effect in such a case, though I am unable to support the views of those who maintain that it is actually harmful. What is, however, undoubtedly true is that iodine administered in prolonged and heavy doses to a *simple* goitre may, and often does, induce the onset of toxic symptoms, a condition to which the clumsy names of iodine Basedow, or constitutional iodism, have been applied.

The second cause of the difference between primary and secondary toxic goitre are the stresses applied to the gland. These vary in degree and possibly in nature. In degree they vary in that in the latter case they arise at a later period in life, when poise and emotional control are more established, and when, to a certain extent, experience has taught that molehills are not mountains, and that even mountains when looked at from the heights of a more serene age are no longer so high. The difference in kind of the stimulus to the gland is a more debatable question. There is little doubt that in primary Graves' disease the stimulus to the gland ultimately reaches it by way of a hormone secreted by the anterior pituitary. In the case of secondary Graves' disease that is more open to question, and it seems possible that the stimulus is of a more direct kind related to the alternations of hyperplasia and regression taking place in the colloid goitre, and possibly also related to alterations in the activity of the adrenal glands.

The third point of difference, as we have seen, relates to the state of the bodily organs. This is mainly of importance in regard to the heart. In primary Graves' disease tachycardia can and does continue for a remarkably long time without leading to alterations in rhythm. Auricular fibrillation does occur, but very infrequently. In secondary Graves' disease, on the other hand, alterations in rhythm and cardiac failure occur much more readily and frequently, in spite of the fact that the basal metabolic rate, though nearly always raised, is never raised to the extent that it is in the primary cases. This, I think, must be due to the fact that in the secondary cases the stimulus is applied to a heart whose reserve is already diminished, and whose musculature is no longer in a condition to withstand the strain of prolonged over-action.

The fact that in primary toxic goitre it is the whole epithelium of the gland which responds to the exciting factors, accounts for the high level to which the basal metabolic rate is often raised, and also accounts for the occurrence of the gastro-intestinal and other crises of this disease. In the secondary cases crises do not occur in the same way, which I think is explained by the fact that only a proportion of the epithelium is responsive. The relation of the thyrotrophic hormone of the anterior pituitary to the development of toxic goitre is at present far from clear. A condition closely resembling exophthalmic goitre can be produced in animals by its administration, but only for a limited time, after which it ceases to have effect; and, paradoxically, the degree of exophthalmos it produces may be even more marked if the thyroid has been removed before its administration. From what we know at present it would seem that its action is mainly one of sympathetic stimulation, bringing the thyroid in, as it were, by way of reinforcement, and that it is this latter gland which transforms what might have been a skirmish into trench warfare.

In addition to primary and secondary toxic goitre, I also want to mention the type of case to which the terms "*forme fruste*," or masked hyperthyroidism, have been loosely and indiscriminately applied. Trousseau originally used the term "*formes frustes*" to describe cases of exophthalmic goitre without exophthalmos, and was undoubtedly referring to cases of what we

now term secondary toxic goitre. Dunhill, in his admirable Lettsomian lectures, points out that the term masked hyperthyroidism has been used to describe four separate conditions. Firstly, cases where the goitre is entirely substernal or intrathoracic; secondly, where enlargement of the thyroid, though obvious to a competent examiner, has not been detected; thirdly, cases where a goitre and heart failure are present, but where the relationship of cause and effect has been missed; and fourthly, where some symptoms are present but there is actually no enlargement of the gland. The first group are in no sense "masked" from competent observers, and in the second and third groups Dunhill wisely observes that it is the doctor rather than the hyperthyroidism who is masked. I have already given my reasons for disbelief in the existence of the fourth group.

There remain, however, two further classes of case which are often troublesome. In the first of these some other condition in the gland, such as syphilis, tuberculosis or sometimes carcinoma may produce thyrotoxic symptoms. I have operated on two cases which I thought to be primary toxic goitres which turned out on section to be cases of tuberculosis, and I have several times seen mild toxic symptoms in cases of carcinoma of the thyroid. Again, progressive muscular atrophy closely resembles, in the emaciation produced, severe toxic goitre, and it would appear that there may well be more than resemblance. Cases have been reported, and I have recently operated on one for Sir Arthur Hurst, in which well marked progressive muscular atrophy coexisted with primary Graves' disease. In such cases thyroidectomy in a proportion of the cases arrests the muscular atrophy—a fact which needs careful confirmation in view of its obvious importance, and the similarity between progressive muscular atrophy and the severe muscular wasting common in Graves' disease.

In early phthisis, too, the weight loss, tachycardia, weakness and moist skin, together often with some fullness of the thyroid, may lead to a diagnosis of hyperthyroidism which, in fact, may well be present, but of passing and secondary significance.

The second class of case which comes into this group of pseudo-hyperthyroid cases is that group of long-suffering patients who may be termed cases of neurocirculatory asthenia, or neurasthenia, or what you will, but whose bodies have so often in the past been the testing ground of all the "pexies" or "orrhaphys" of surgery, or the drugs and potions of medicine, according to whether their family doctor's leanings are surgical or medical. Not a few of them come to the thyroid surgeon nowadays chiefly on account of fatigue and a raised pulse rate. They usually show no goitre, their skin is quite unlike the beautiful silky smoothness of the thyrotoxic case, they complain of feeling the cold rather than the heat, and their basal metabolic rate is normal. Needless to say operation in such a case would be disastrous, and yet to persuade the patient and her doctor of this is often very difficult.

Toxic goitre in children, while not by any means common, occurs often enough to form a little problem of its own. It is always of the primary variety and differs in no way from the disease in the adult except that exophthalmos is usually less marked, and that B.M.R. estimations are generally rather on the low side. Considering the important part which the thyroid plays in the mental and physical development of the growing child, it is obvious that operative interference should be avoided for as long as possible. My own practice has been to avoid operation so long as the weight loss can be checked, or converted into a gain by medical treatment. In this treatment iodine plays a part. It may well be that diiodotyrosine may be even more effective, as it is said to produce, contrary to what happens with iodine, as much mprovement on subsequent administrations as on the first occasion in which it is used.

In children with toxic goitre, I think it essential, if their tonsils show any evidence at all of disease, to have them removed. It is important to remember that of the cases of toxic goitre which die while undergoing medical treatment, in three-quarters of the cases it is an attack of acute tonsillitis which precipitates death. Considering the liability to acute tonsillitis in childhood, it is important to run no risks in this respect.

Some Notes on English Heraldry

By H. St. John Rumsey, Esq., M.A.

WHAT is your crest, and how do you know that you have a right to use it? There are three sources of information: first, the College of Arms; secondly, reference books giving some of the crests and coats of arms used by various families, and lastly, your own family records.

It should be definitely realised that the College of Arms, in Queen Victoria Street, has the final word. They hold all the official records, so any

claim of which they do not know is not, strictly speaking, authentic, but, owing to the very heavy fees charged by them, 99 per cent. of the crest-using families rely on one or other of the alternative sources.

Books of reference are numerous. Burke's "Landed Gentry," Fox-Davies' "Complete Guide to Heraldry," and Fairbairn's "Royal Book of Crests" are three of the best known, but to find a record of your crest or coat of arms, or to fail to find them, proves nothing definitely. To find them corroborates your claim, but does not make it irrefutable. To fail to find them may merely mean that your ancestor could not or would not be bothered to interview the representative of the publisher of the book in question, or it may mean that your claim rests insecurely on what "his great-aunt Amelia told your grandfather"! There is no doubt that Fairbairn's "Crests" omits a large number of well authenticated crests, while it includes a number to which the families quoted never had a valid claim.

Family records, if carefully kept and giving full details of names in full, lands held, occupations, dates of birth and death with places of burial, are probably more reliable than books of reference, compiled to justify the local jeweller's offer to engrave table silver with an appropriate crest!

COATS OF ARMS AND CRESTS

People often say, "We have a crest, but no coat of arms." This fallacy is very common and must be contradicted. No crests without coats of arms have ever been granted; the two are inseparable component parts of an heraldic achievement, from the beginning of the seventeenth century. In early times a grant of arms did not include a crest, which was almost unknown until the sixteenth century. For another century grants of arms seldom included crests, so that while an ancient coat of arms may exist without a crest, it is quite impossible for an authentic crest to exist without its coat of arms. In many cases crests survive in a family long after all trace of the arms has been lost, but this is simply because the crest is the only part of the grant which has been in continuous use on the table silver.

THE TORSE

Under the crest is usually seen a torse or wreath; it was used either to fasten the crest to the helmet or to hide the join between the two. It is generally shown as a straight bar divided into six equal portions, but as it was fitted to the curve of the helmet, it looks much better if it is slightly curved. Its colours are those of the principal colours of the shield, or, if the shield is quartered, it will follow the colours of the first quarter. A few crests have, instead of a torse, a cap of maintenance or a coronet.

THE HELMET

When the crest and arms are shown on a full heraldic achievement, as in the illustration, it is usual to show the crest on a helmet. For an esquire or a gentleman the helmet is steel and is shown in profile with a closed visor.

THE SHIELD

Misapprehensions with regard to heraldic arms are so frequent and varied that it is only possible to mention a few broad outlines. First of all, the shield may be drawn in any shape that the owner or artist wishes; the tendency nowadays is to keep the design for a bookplate rather simple, but many people prefer a more elaborate design giving the engraver more scope. Although many modern bookplates do not indicate the tints or colours, the great majority do show them; they are indicated as follows: Unshaded is "argent" or silver; shaded with spots is "or," *i.e.*, gold; perpendicular shading is "gules" or red; horizontal is "azure" or blue; cross-hatching (horizontal and perpendicular) is "sable" or black; "ermine" is indicated by arrow-like marks on a plain background, while "vair" (another fur) is indicated by small shield-shapes, alternately blue and white.

So many bookplates are wrongly engraved because the artists do not realise that the shading is not for artistic effect but to indicate a metal, colour or fur, that it is necessary to get the basic principle clear. The rule is "metal on colour, or colour on metal." If the "field," *i.e.*, the tint of the shield itself, is metal, the charges or devices displayed will be in colour, and *vice versa*.

QUARTERING

The origin and meaning of quartering is little understood by the average owner of a coat of arms, but the system is really very simple. Take a half-crown as an illustration: the shield is quartered, in the first are the lions of England, in the second is the lion rampant of Scotland, in the third is the Irish harp, while the English lions are repeated in the fourth to make the design symmetrical. As the shield on the coin is quartered to indicate the union of countries under one sovereign, so quartering is used to indicate the union of families. The important thing to realise is that the arms descend through marriage only when the wife is an heraldic heiress, *i.e.*, when her father has no son to inherit the arms.

If A marries B, an only child, during B's lifetime her arms are shown on a small shield in the middle of the original shield; this is called an "escutcheon of pretence." After her death, the sons of the marriage would use a quartered shield, with the arms of A top left and bottom right, with the arms of B top right and bottom left.

If A the younger or one of his descendants marries C, who is also an heraldic heiress, after her death her descendants would show her arms in the bottom left corner, with the arms of A shown again in the bottom right. There must always be an easily divisible number of quarterings in a shield, and the original arms are repeated if necessary to make up the total; for instance, if there were eight quarterings, the original arms would be used again to make up nine.

Great importance seems to be attached to the possession of a large number of quarterings, but it is obviously a matter of chance whether or not heraldic heiresses marry into the family. It may happen that a family in the course of its history makes many alliances with old and distinguished families, but never inherits any quarterings, while in another case a rich man whose grant of arms is quite recent, might marry an heiress with fifteen quarterings; in such a case their descendants would be entitled to sixteen quarterings. Thus, the antiquity of a right to use arms is not necessarily indicated by the number of quarterings, but rather by the simplicity of the arms or the first quarter of them.

IMPALEMENT

In the case of any marriage when the wife is not an heiress, her arms may be impaled with those of her husband; this means that his arms occupy the whole of the left side of the shield, while hers occupy the whole of the right side, but after her death her arms must not be perpetuated. Impalement is seldom used in modern heraldry, because any silver so engraved should be re-engraved for the next generation, although in the case of a silver wedding presentation it would be essentially suitable. So few people take the trouble to understand heraldry and its laws that impalement would probably lead to further mistakes and their perpetuation.

DEXTER AND SINISTER

It is important to realise that the left side of a shield as we look at it is called the dexter, while the right side is called the sinister. The reason for this apparent contradiction is that the heraldic terms, dexter and sinister, are from the point of view of the bearer of the shield, who was behind it.

THE MANTLING

The flowing curves and foliations on both sides of the helmet and shield are the artists' elaborations of the original cloth, which hung from the top of the helmet to absorb the heat of the sun shining on metal armour. The treatment of mantling may vary to any extent; its plainness or elaboration depend on individual taste. The tints of the mantling follow those of the arms or the first quarter.

THE MOTTO

Contrary to general belief the motto has no official recognition by the College of Arms, but can be dropped or changed as often as the owner likes; furthermore, it may be placed in any position that the owner chooses.

An "Heraldic Achievement" worked in tapestry which offers the ideal medium for the display of heraldic designs. A "chart" is first made by drawing (free-hand) on graph paper (ten squares to the inch), the drawing is then "squared" by including the square through which the freehand line passes. The best size tapestry canvas is ten to the inch. The shading of the mantling should be done in about seven shades of the colour.

THE ARMS OF A LADY

The laws of heraldry forbid any lady, with the single exception of the Queen regnant, to use a shield, helmet, mantling, crest or motto. Her arms should be shown on a lozenge suspended from a ribbon, while further ornamentation often takes the form of a floral wreath. Many heraldic experts, while admitting that the College of Arms has the final word, do not agree with the with-

holding of the crest and motto. On the death of her husband a widow, according to the dictates of the College of Arms, must have the family crest removed from all the table silver which her husband has left to her! To insist or to try to insist on such removal is unreasonable and impracticable. In the matter of the motto it seems still more unreasonable, since the College of Arms disclaims all responsibility in this direction.

From other points of view there is much to be said in favour of the retention of the crest and motto by a widow. If, guided by the College of Arms, a widow orders a bookplate on which the crest and motto are omitted, so little is generally known and understood about heraldry that the impression will be given that the family crest and motto do not exist. A bookplate is made with two main objects: first, to give pleasure to the user, and secondly, to help to perpetuate the family arms in their entirety.

In the early days of heraldry, when the arms were in regular and constant use by all the men of the family, the enforced omission of the crest and motto by ladies could do no harm, but in modern times there is much to be said in favour of keeping the crest and motto with the arms in order to perpetuate them.

Recent Additions to the Wills Library

Bailey (Hamilton): Demonstrations of Physical Signs in Clinical Surgery. 6th edn. Wright, 1937, pp. 284.

Beaumont (G. E.): Medicine. 3rd edn. Churchill, 1937, pp. 780.

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Browne (Francis J.): Antenatal and Postnatal Care. 2nd edn. Churchill, 1937, pp. 588.

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Gask (G. E.) and Ross (J. P.): The Surgery of the Sympathetic Nervous System. 2nd edn. 1937, pp. 191.

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Harris (Wilfred): The Facial Neuralgias. Oxford Univ. Pr., 1937, pp. 109.

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Johnstone (R. W.): A Textbook of Midwifery. 9th edn. Black, 1937, pp. 483.

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Mekie (Eric C.): Handbook of Surgery. Livingstone, 1936, pp. 699.

Mennell (James B.): Physical Treatment by Movement, Manipulation and Massage. 3rd edn. Churchill, 1934, pp. 618.

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Romanis (W. H. C.) and Mitchiner (Philip) : The Science and Practice of Surgery. 6th edn. 2 vols. Churchill, 1937, pp. 808 ; 978.

Smith (Ernest A.) : A Manual of Dental Metallurgy. 5th edn. Churchill, 1937, pp. 320.

Smith (Sydney) (Editor) : Taylor's Principles and Practice of Medical Jurisprudence. 9th edn. 2 vols. Churchill, 1934, pp. 878 ; 973.

Souttar (H. S.) : A Surgeon's Pocket Book. 2nd edn. Heinemann, 1937, pp. 285. (*Presentation.*)

Souttarr (H. S.) : The Art of Surgery. 3rd edn. Heinemann, 1937, pp. 630. (*Presentation.*)

Taylor's Medical Jurisprudence. *See* Smith (Sydney), Editor.

Wheeler and Jack's Handbook of Medicine. Revised by John Henderson. 10th edn. Livingstone, 1937, pp. 703.

Wingfield (R. C.) : Pulmonary Tuberculosis in Practice. Arnold, 1937, pp. 122.

Whitby (L. E. H.) and Britton (C. J. C.) : Disorders of the Blood. 2nd edn. Churchill, 1937, pp. 582.

Winter (Leo) : A Textbook of Exodontia. 3rd edn. Kimpton, 1937, pp. 502.

Woodwark (Sir Stanley) : Manual of Medicine. 4th edn. Oxford Univ. Pr., 1935, pp. 619.

The undermentioned books have been presented by Dr. R. D. Gillespie :—

Buehler (C.) and Hetzer (H.) : Testing Children's Development from Birth to School Age. Allen and Unwin, 1935, pp. 191.

Burt (Cyril) : The Young Delinquent. 2nd edn. Univ. London Pr., 1937, pp. 645.

Cattell (Raymond B.) : A Guide to Mental Testing for Psychological Clinics, Schools and Industrial Psychologists. Univ. London Pr., 1936, pp. 312.

Drever (J.) and Collins (M.) : Performance Tests of Intelligence ; A Series of Non-linguistic Tests for Deaf and Normal Children. 2nd edn. Oliver & Boyd, 1936, pp. 55.

Flugel (J. C.) : A Hundred Years of Psychology. Duckworth, 1935, pp. 384.

Klein (M.) : The Psycho-Analysis of Children. 2nd edn. L. & V. Woolf, 1937, pp. 393.

Penrose (L. S.) : Mental Defect. Sidgwick & Jackson, 1933, pp. 183.

Scottish Council for Research : The Intelligence of Scottish Children. A National Survey of an Age-group. Univ. London Pr., pp. 160.

Reviews

Dental Surgery and Pathology Notes. By ERNEST B. DOWSETT, D.S.O., L.R.C.P., M.R.C.S., L.D.S. Published by the Dental Manufacturing Company, Ltd. Seventh Edition, 1937. *Price* 5*s.*

THESE Notes are so well known to dental students that little introduction to the seventh edition is needed. The text of this edition has been enlarged and rewritten in certain parts, as, for instance, in the section on Diseases of the Periodontal Membrane.

This book is invaluable to students in their final year, for the purpose of revising Dental Surgery and Pathology, when used in conjunction with one of the larger and more detailed textbooks on this subject.

The Dissection and Study of the Sheep's Brain. By JAMES WILKIE, B.Sc. Published by the Oxford University Press. *Price* 6*s.*

COMPARATIVE anatomical studies presented in an easily consumable manner only rarely come our way. One is, therefore, from the beginning prejudiced in favour of Mr. Wilkie. How vaguely the value of any such work is, for the most part, understood in the course of medical reading is often only too obvious, but it needs no more than a glance at this small volume to realise that there are many opportunities at hand not only for the better understanding of human anatomy, but also for the widening of one's outlook in every aspect of medicine.

As regards the human central nervous system, I feel I am not alone in considering that here is a system the structure of which it is more difficult to grasp both in general and in detail than that of any other system. For a long time it has appeared to me that the proper approach to a full understanding of the brain is by way of the less highly evolved vertebrates, but the very brief and superficial study that we give to the brain of the dogfish, the frog and the rabbit helps us only in the very smallest degree—much less so than does the comparison of such parts as the skeleton or the heart. The fault largely lies with the organ ; the very size of the brain, not to mention the substance, make it impossible to handle it except microscopically.

The brain of the sheep, material which is quite easily obtained, has often been used in courses

of comparative anatomy, in place of that of the rabbit. In spite of this there has never been any satisfactory book from which to get advice either as to the dissection or as to the structure. In undertaking to fill this gap, Mr. Wilkie puts us greatly in his debt—doubly so, as he has made from this work a truly comparative study, and shows in many places how certain complexities of the human brain are related to the simpler structure of the brain of the sheep. The morphology of the *corpus callosum* and *lamina terminalis*, and the developmental and structural details of the choroidal fissure, clearly and carefully elucidated, are but two valuable parts of the book. One other, I would like to mention, namely the comparative descriptions of those particularly confusing things, the sulcus and gyri of the brain.

The excellent illustrations, all original drawings by the author, form as essential a feature of this commendable volume as any of the script.

I received only one shock—that Mr. Wilkie should have allowed himself to opercularise, and even to unopercularise, a sulcus.

W. E. T.

Correspondence

Rugby

To the Editor of the GAZETTE

SIR,—I have been an interested follower of the correspondence published in the *Gazette* about our Rugby XV, and I appreciate J. E. Giesen's reply to the very destructive criticism in the previous issue.

A point that he does not make clear is the big difference between school rugby and the first-class variety, and it is few first-year men who rise immediately to the first XV.

His scheme, which worked very well and which was carried out as a routine ten to fifteen years ago, did not find many ready-made players. The suggestion of Windsor Lewis is one which should be considered very seriously. Personally I am, and always have been, dead against this subsidising of rugby players, but the higher authorities, such as the Committee of the Rugby Union, are either in favour of it or else close an eye to it. If all the hospitals adopted this measure it would either reduce the scheme to ineffectiveness, or else start a competition as to which hospital could offer the biggest fee to their so-called amateur players. If this occurred the authorities would interfere, as they did in a similar case of the American Universities.

My suggestion is, if you are going to do it—do not be the last.

Above all, do not let us be despondent.

I am sure the Guy's spirit is still present, but adverse criticism and lack of support possibly one day may kill it.

Yours, etc.,

J. R. F. POPPLEWELL.

The Lindens,
Whittlesey,
near Peterborough.

To the Editor of the GAZETTE

SIR,—As one who has the welfare of Guy's rugby very much at heart, I have been very pleased to read the correspondence in the last two issues of the *Gazette* and your comments in "Passim." Such an expression of views cannot fail to do anything but good.

I do not believe, however, that any drastic measures are necessary, and I sympathise with the captain, who must be receiving an abundance of advice, in the present trying time, and the following comments are offered in the hope that they may be of some constructive help.

J. E. Giesen in his letter which you publish in your issue of 4th December, explains very clearly the difficulty of watching the junior teams for talent, and how the captain is torn between watching the "A" or training with the 1st XV on Wednesdays, and this, he points out, in the midst of his hospital appointments and "finals." He suggests either non-playing scouts or a weekly meeting of all the captains and secretaries of the teams. Neither of these plans appeals to me. The former is, I feel, impracticable, and the latter would be better carried out informally.

In the year I was captain I was fortunate in having a good captain of the "A" who co-operated loyally and used to report informally about the talent he had in his team. I remember him telling me one day about a young New Zealander, a fly half, who had arrived recently at the Hospital. With Mr. Cook's permission—given, I would add, graciously and without hesitation (I was gynæcological dresser at the time and O.P.'s were on Wednesday afternoons)—I went down to Brighton to watch the "A" play Brighton College, and afterwards asked the captain of the "A" to play the new arrival at centre three-quarter in future (Windsor Lewis was fly half of the 1st XV); J. E. Giesen's subsequent history is known to all. I mention this

because under this system it is impossible for a player of merit to remain undiscovered in the junior teams, and also it enables a promising player to be played in the position in which he may be required to play at a later date in the senior team. I think it is not generally realised what an enormous difference there is between the opponents of the 1st and "A" XV's, and a man who shows up reasonably well in the "A" may be completely out of his depth in the 1st XV.

There can be no doubt, as Windsor Lewis points out in his letter, that the Games Scholarships offered by other hospitals will continue to draw the "ready-mades" and their friends to them, but just as no self-respecting tailor will deal in "reach-me-downs," I hope and pray that Guy's will never enter the "ready-made" business. I use the word "business" deliberately, because I brought a bee-hive around my head in the latter part of 1929 when, at a United Hospitals' Committee Meeting, I raised the question of men (Internationals) who had not been students at a London hospital but had obtained jobs after qualification playing in the Cup matches. A senior member of the staff of a London teaching hospital said at the meeting that the Deans of certain hospitals had realised that a successful rugby team was a good advertisement and was a financial asset!

A few months after this we won the Cup after a most enjoyable game, and at the dinner after the match it gave me great pleasure to be able to point out, when proposing the health of the Bart.'s team, that the game had been played by thirty amateurs. This remark produced a look of self-consciousness on the faces of certain of the representatives of other hospitals who were present as guests of the United Hospitals' Club.

In the last paragraph of his letter Giesen deplores the lack of support given to rugby by the junior members of the Hospital. I think a conversation I had with a Guy's house officer whom I chanced to sit next to at a private dinner party last year may shed some light. He was a useful-looking fellow, who told me that he used to play for the "A" and sometimes for the 1st XV in the pack, but had given up playing with the approach of his finals and House jobs, because, as he put it, competition was so keen and he could not spare the time and still keep up with the bright boys. I must say I was rather shocked, and if this represents the attitude of those at the Hospital these days I would refer them to the last paragraph of your correspondent "Tragus," whose last game for the Hospital 4th XV, he tells us, was thirty years ago in which he says: "Some of those who are for ever waving themselves round patients might learn much of human nature from a close study of this great game." It is certain that they will be no worse, and I feel sure that a man will be a better doctor for having taken part in Hospital sport, and such a thing as a man playing for an outside club should be unheard of; it is only about fifteen years since a Welsh international could not get a place in the Hospital side and played in the "A" team.

I arrived at Guy's half-way through the football season and played in the "A" side until just before the end of the season. I could have continued to play in first-class rugby for the provincial side for which I had previously been playing, with all expenses paid, but I never regret playing in the Guy's "A." In the following year George Lashmore played for Guy's "A" when he could have played for Leicester each week, and did in fact play for Leicestershire in the Mid-week County Championship matches.

May I suggest that the Hospital authorities might with advantage copy one aspect of the Nazi Party's policy which takes cognisance of whether a candidate for an appointment is a good Nazi along with his academic record. At Guy's a student is "signed up" after each appointment. Why should not the fact that he is a good Guy's man who spends his Saturday afternoons playing hockey, cricket, soccer or rugger for one of the Hospital teams be recorded? If the system had been in operation I feel that possibly the Guy's house officer I sat next to at dinner would have continued to play rugby with benefit to himself and the Hospital. Keenness and encouragement from the Staff and junior members of the Hospital would help enormously, as Guy's would again take her place in the front rank. There is no need to buy players if Guy's makes the best use of those she has got.

Yours, etc.,

TERENCE G. ROBINSON.

102, Station Road,
Epsom.

To the Editor of the GAZETTE

SIR,—It is somewhat amusing to read the recent letters on the so-called Guy's rugger rot.

Some years ago a Supporters' Club was suggested by a number of Guy's men, who foresaw the trouble to come, and there is a letter of mine, in a back number of the *Gazette*, the contents of which gained the approval of a number of Guy's rugger men. Unfortunately no one could be found in the London district to run it.

Guy's rugger has relied on its good name in the past, that is to say, since the War, on its South African contingent, backed by players from other Colonies, our own Universities and schools.

In fact at one time there were so many South Africans that I have heard the crowd yell to the Harlequins, when playing Guy's, "Come on, England," but no one ever heard those South Africans say that they came over here because they wanted to play rugger with a scholarship; they came because it was Guy's Hospital, and now they have a University and Medical School of their own to rally round.

If Guy's is to attract rugger players, by handing out scholarships, why not a scholarship in everything, not to mention darts and halfpenny nap.

I am all against the letter of Windsor Lewis and all for the letter of Jim Giesen; Guy's does not want subsidised rugger players. Personally I should hate to play in a team, whatever the sport, with men I knew that were being paid, in a roundabout way; after all, it is as near making the sport professional as you can go, and it surprises me to hear a man of Windsor Lewis's calibre suggesting such a thing, but perhaps I read his letter wrong and he is all for ending the paid player. Most players get their County and International caps without subsidy, and those few who are poor rely on the paying of their expenses and the goodwill and friendship of their team's supporters.

Let Guy's have a clean side, such as it is to-day, give them every encouragement to go hard, support them in every way, bring out the Milk Churn, tell the new student where it came from and what it stands for, remember there are many good men on the Staff, who have fought for it, and what grand innocent fun it was, and then we shall regain the Guy's team spirit not only in rugger, but in everything; and, by the way, there is nothing wrong with to-day's team—it is the supporters; and lastly, I ask you, Mr. Editor, to see that a fixture list is printed in your *Gazette* a month before the game is played so that we who live so far away can arrange to come to London, when Guy's is playing in the London district, or publish a small annual book, with fixtures of every kind—sport, dinners, dances, sales, lectures, etc. You would have a good sale, and everything related to Guy's would benefit.

Yours, etc.,

GEORGE G. ELLIS.

211, Sandgate Road,
Folkestone.

(*** We have referred to this subject elsewhere.—*Ed.*)

The Association of Nurses

To the Editor of the GAZETTE

SIR,—It seems a pity that your previously fine efforts to aid the nurses in obtaining better conditions should now be clouded by the allegation that the newly formed Association of Nurses is a political body. This argument seems to be based on a complete misconception of the relations existing between the Association and the Trades Union Congress, together with an incomplete understanding of the function of the latter body.

As opinion does not enter into this side of the question, let me briefly state the facts.

The Association is, and always has been, prepared to co-operate with any body in a position to assist its plans for the betterment of conditions within the nursing profession and the betterment of the service it gives. It thus came into immediate relationship with the Trades Union Congress, which had just formulated the Nurses' Charter, and the Congress appointed a section of the Advisory Committee to interview Miss Silverthorne, the Secretary of the Association, with a view to discussing affiliation—a position which, even if the Congress were a political body, can scarcely be described as compromising.

It should not be necessary to inform a journal of the standing of the *Guy's Hospital Gazette* that the Trades Union Congress is not a political body, but is the centre of co-ordination of the majority of trade unions and many professional bodies. The individuals within such organisations have their freedom of political opinion preserved not only by custom but by law.

It might be apt to point out that the British Medical Association has at present formed a committee to co-operate with the Trades Union Congress on mutually interesting matters, and that only last week such eminent scientists as Professor Hogben, Regius Professor of Biology at Aberdeen, and others have likewise stated their willingness to join in such co-operation. Above all, the College of Nursing has, in the *Nursing Times* of the 21st October, 1937, stated its willingness to confer with the Trades Union Congress. Why should you, therefore, think that the Association is any more "political" than the College of Nursing? It was admitted by you in a previous issue that a body along the lines of the Association is badly needed, and is not supplied by the College of Nursing. Surely, therefore, every encouragement should be given now that your doubts are settled.

Furthermore, the issue of Free Speech in the Nurses' Home is important to the nurses. On

account of "the fear of a more serious rift in the nurses' ranks" and in the name of fair play to both of them—both unpolitical—a meeting of the Association in the Home to explain its purposes is desirable.

Yours, etc.,
L. M. HENRY.

12, Gt. Ormond Street,
W.C.1.

To the Editor of the GAZETTE

SIR,—In your issue of the 20th November I read that you do not favour eight-hour shifts for nurses as it would not be in the best interests of the patients owing to the more frequent changes as compared with twelve-hour tours of duty. This seems hardly a convincing reason.

For many years I worked in the Singapore General Hospital. There the nurses have the three-shift system, and I can testify to its great success and smoother and easier working from the patients' as well as from the nurses' and other points of view. The twenty-four hours are divided into three shifts, one each of seven, eight and nine hours, the last being the night shift. With the twelve-hour system the patients have just as many changes of nurses owing to mealtimes, off-duty hours, etc.

Is not the real objection to the introduction of three shifts that of expense?

Hospital costs in reality are matters for the public, who have already more than doubled the income of Guy's since the War. Were the three-shift system introduced at Guy's the extra number of nurses would probably not exceed 10 per cent., and not be, as might be supposed, nearly 50 per cent.

Cannot such a great and progressive Hospital, such as Guy's, take the lead among our voluntary hospitals and introduce the more up-to-date three-shift system for its nurses? It would meet with the wholehearted support and approval of the vast majority of the British public.

Yours, etc.,
KENNETH BLACK.

Sports Club,
St. James's Square,
S.W.1.

(*** Both these correspondents make their points with force and pungency. It will be interesting to see what conclusions on these points are arrived at by the Parliamentary Committee recently instituted to inquire into conditions in the nursing world. We propose to return to this subject at a later date when the conclusions of the Committee are published.—*Ed.*)

"The Niggers"

To the Editor of the GAZETTE

SIR,—All honour to those who for years have given their talents, time and money to provide the Christmas Day "Nigger" Entertainment.

Many of us, however, have felt that to drop this traditional party for some seasons would be most desirable, and await fresh developments. I am sure the patients would much prefer to have two friends each to tea at their own lockers.

The day would be pleasant and quite full enough with the nurses' carols, presents, the visit of the Superintendent and Matron. The special dinner for patients and nurses, which the Sisters take such pride in providing, a rest interval, the two friends and tea from 3 to 5 p.m. Perhaps in the early evening a few songs, *not* a concert. As a Ward Sister as long ago as 1904, I often felt the whole affair too much for sick people, and now that the Hospital has increased in all departments it is doubly so. For four to five hours crowds throng the corridors and rush into the wards, quite regardless of the occupants.

The topical jokes cannot amuse the patients, and the medical ones are unseemly before those who have experienced operations, painful investigations, or childbirth—or, worse still, awaiting those events. Changes are good. We have all survived the dissolution of the New Year's Eve Bonfire. Guy's will continue to carry on its own good work.

Yours, etc.,
FRANCES A. SHELDON.

29, Priory Road,
N.W.6.

(*** We have referred to this subject elsewhere.—*Ed.*)

Alleged Cure for Tuberculosis

To the Editor of the GAZETTE

SIR,—I have recently read a thoroughly interesting book which deals with an alleged cure for tuberculosis. The book is by a Doctor Schenhaye, who enjoys considerable medical prominence on the Continent. The title is "Uruchia Wabo" (or Stevens' Cure). It deals with the discovery of a plant in South Africa by a man named Stevens, who, it appears, was suffering from tuberculosis. On application of an infusion of this "Uruchialoabo" plant, which he drank over a certain period, he claims to have been cured. Further, he introduced it into England, where treatment with it is said to have brought about a cure in various cases. Apparently

Dr. Sechenhaye used it extensively among his own patients and found it to be equally efficacious. In his book he tabulates the histories of a number of his patients, from the time of admittance to their discharge, apparently *cured* of tuberculosis.

The above is a rough summary of the contents of this book which has so aroused my curiosity. Whether or not its claims are justified I do not know. That I or none of my associates have ever heard of this cure strikes me as a trifle odd, to say the least of it. Perhaps the publication of this letter in Guy's *Gazette* may arouse the interest of those more qualified to speak than myself.

I conclude with the sincere hope that someone may take pity on my ignorance.

Yours, etc.,

"A CURIOUS CELT."

Guy's Hospital,
S.E.1.

(*** We feel very sympathetically towards our correspondent's ignorance. Some time ago we had occasion to investigate the claims put forward on behalf of the Friedmann treatment of tuberculosis (the injection of live unattenuated strains of reptillian tubercle bacilli). Series of cases numbering thousands apiece had been treated by this therapy—principally in Hungary—with apparently excellent results, but here in England the chest specialists scarcely knew the name Friedmann. In view of the fact that some hundreds of new remedies for tuberculosis are put forward every year, we believe that our correspondent would do well to remain in his state of blissful ignorance.—*Ed.*)

Buchmanism

To the Editor of the GAZETTE

SIR,—I wonder if you really think the "superior attitude" you took in your remarks (in December 4th issue) in response to Mr. Nelson's letter was justified—or is it just the Guy's way?

It occurred to me that it might have been better to have refrained from a reply—if a reply in a decent spirit was unsuitable.

Just an opinion.

Yours, etc.,

A. HEDLEY COLE.

65, Broomwood Road,
Clapham Junction, S.W.11.

(*** We hereby renounce our attempts to infuse a little logic into this discussion. We have received other letters on this subject, but since their writers are concerned principally with their own personal "revolutions," we do not feel our readers would be interested in what would seem to us to be mere examples of moral exhibitionism.—*Ed.*)

Cleft Palates

To the Editor of the GAZETTE

SIR,—There is no doubt that some practitioners lay themselves open to Dr. Cronin's criticism with regard to the reading of current literature, but one must not forget that knowledge of new methods takes time to disseminate; this, evidently, must be the excuse for the state of affairs found in the two cases that I have seen recently.

Twice in the last month I have had to reassure young mothers that their cleft lip and palate babies could be made into reasonable citizens—cosmetically and phonetically. And twice have I had to raise their hopes, blighted by doctors who evidently still believe that the Langenbeck operation is the sole answer to the cleft palate's prayer.

So I would like to bring to more general notice modern methods of treating cleft lip and palate.

A modified Veau operation with a pharyngoplasty is done at one year. One year is considered the earliest time that the child can stand an anæsthetic and operation for an hour; at this age, too, the child has not learned to speak. The operation allows the palate to fall back on to the post-pharyngeal wall without serious interference to its musculature, and, in consequence, the child can be taught to speak with negligible difference from other children.

The hare-lip is done as soon as possible, depending on the condition of the month-old baby. Even if there is a bilateral cleft with protruding maxilla, the mere early closure of the lip will, in most cases, pull the bone back into position. If the lip repair is not perfect after the first procedure, a subsequent plastic operation will produce the required cosmetic result; in fact, normal women have been known to be envious of the Cupid's bow produced by a secondary hare-lip operation.

It may be argued that if the baby is feeding well with a spoon and putting on weight, why is the lip repaired at such an early age? There are some diehard surgeons for whom cosmetic surgery has no place, who might well ask such a question, but they forget the distress that the poor mother suffers whenever she shows her baby to her friends; and, if there is no other reason for repair, then this one is ample to justify the operation.

Yours, etc.,

GRAHAM HUMBY.

24, Portland Place,
W.1.

Invalid Children's Aid Association

Bermondsey and Rotherhithe Branch

To the Editor of the GAZETTE

SIR,—This branch of the I.C.A.A. has, since its foundation, been closely associated with Guy's. The first Chairman was Sir Alfred Fripp, and after his comparatively early death in 1930, which his former colleagues and his many friends so much deplored, I succeeded to his place.

Among our Vice-Presidents are Major Ian Hay Beith, one of our Governors who has done much to help this branch, Mr. Eason and Dr. Cameron.

During the year since its foundation a very considerable number of children, both from In- and Out-Patients, have come under our care, and indeed I doubt if it is at all generally known that a large number of them reach us from Guy's.

When I entered Guy's in 1885 there was no body of people to look after these children on leaving hospital, with the result that much skilled treatment and advice therein obtained was often wasted. No longer does this happen, for the Association which started in 1888 has progressively increased its work in this city and outside, and of latter years municipal bodies and other agencies help to carry on the good work. Not only does our Association spend money in arranging prolonged convalescence for the children in order to consolidate recovery after illness, but it provides surgical instruments and other accessories where required, and, what is equally if not more important, by means of its visitors it keeps in close touch with and supervises the children in their homes, often over a period of years, and in this way they are able to make friends also with the parents, thereby carrying into practice the motto of the Association, "To every child a chance." Unhappily, this year our branch is in debt for some £30, because we have overspent our income for our children. But, careful as we are in all our expenditure, what else was to be done except to refuse the necessary help which is what we shall have to do next year if we cannot cover the deficit.

In 1930 the *Gazette* helped us materially by issuing an appeal in connection with a boxing tournament given for us by the Hay's Wharf Boxing Association. Will you, please, help us again? If at this time of goodwill any of your readers will send me contributions for our branch of the I.C.A.A., or become annual subscribers, I shall indeed be grateful, because the Borough children will not then apply to us in vain.

Yours, etc.,

JOHN FAWCETT.

10, Chester Terrace,
Regent's Park, N.W.3.

Cardiac Vascular Syphilis

To the Editor of the GAZETTE

SIR,—I very much enjoyed Dr. Boland's clinical lecture on Cardiac Vascular Syphilis. May I ask him to be kind enough to clear up the cause of a symptom, of which I could never understand the meaning. It is the hæmoptysis which occurs at the time a valve ruptures. Textbooks speak of granulations in the trachea or bronchi, which are compressed by aneurisms, but I gather his three cases did not have an aneurismal sac at the time the valve ruptured, and even if these were present it is difficult why they should suddenly bleed.

Yours, etc.,

R. E. SMITH.

3, Horton Crescent,
Rugby.

The Dental Dance

THE Annual Dance of the Dental Society was held on Wednesday, 1st December. As last year, the Westminster Palace Rooms were chosen, with Marius B. Winter's Band and his vocalist, Paula Green, a great attraction.

In spite of the unfortunate circumstance of another Hospital dance being held on the same night, a record number of tickets were sold. Congratulations to Jack Symmons, the dance secretary, and his committee, for the energy which they displayed. They even experienced the depressing plight of having to turn people away when all the tickets were sold.

We are deeply grateful to the President, Mr. Herbert, who honoured us with his presence. He must see quite enough of us during hospital hours without having to endure our faces once again during his hours of leisure.

We were also honoured with the presence of Colonel Holman James, duly announed as "Europe's Greatest Exponent of the Stock Whip," who, on learning of our dance, kindly offered to give us a display of his skill, as a cabaret. His entertainment was such that people started murmuring, "Where is the snag?"—and what better compliment could one wish to hear? We are very much indebted to him for the interest that he showed in our Society.

Although the "Bar" was open until 2 a.m., there seemed little of that "characteristic gait" which can be so prevalent on a night such as this. Maybe that after one or two years at this Hospital one acquires a considerable degree of immunity against this weird state of confusion with which one is apt to be stricken on these occasions.

We sincerely hope that the "gentleman" who, last year, early at dawn, found himself at Herne Bay instead of Herne Hill had better luck this time. We fully sympathise with him; at times these Hernes can be so confusing. Oh, calamity! calamity!

N. FISON CLARKE.

Sport

Rugby

Guy's v. Aberavon

(At Honor Oak Park on Saturday, November 27th)

JUDGING by their display against Rosslyn Park, everything pointed to the Hospital giving Aberavon a close game, but they found the visitors at the top of their form, and eventually Aberavon won easily by 3 placed goals and 2 tries (21 points) to nil.

Guy's made further changes in their pack by giving P. D'O. Kolesar his first chance and introducing K. A. Stanyon-Jaques, a scrum half into the back row. Both played sufficiently well to justify the experiment, and Kolesar in particular got through some hard work in the loose.

Aberavon, who have an excellent record this season, fielded their strongest available side, and their exceptionally fast pack were always a source of danger to the Hospital defence.

Although Guy's obtained a fair share of the ball in the set scrums they could do little with it as Brothers and Lewis were so quick round the scrum, that Eustace was often smothered before he could get the ball away. Allen strove valiantly to get his three-quarters into action, but his oppostie number, W. R. Davies, clung on like a leech and allowed him very few chances.

When Guy's did start any passing movements, there was never a semblance of an opening ahead of them, as the visitors' back division marked with devastating closeness and very few movements were allowed to go more than a few yards.

In the face of keen spoiling tactics, Guy's passing became hurried and erratic. Both Dick and Kynaston did splendid individual work, but the line as a whole never looked like penetrating a rock-like defence.

The game was watched by one of the Welsh selectors, and after bombarding the Hospital line for ten minutes Aberavon took the lead when D. M. James, a brilliant forward, rounded off a rush near the posts and T. O. James kicked an easy goal.

For a time Guy's improved, and first Allen and then Dick cut through in fine style, but they were thwarted by Owen-James at full-back, and H. J. Thomas, the right centre, who tackled fearlessly.

However, the Aberavon forwards continued to hammer away, but they were unable to add to their lead until just before the interval, when, in trying to clear their lines, Guy's started a passing movement in their 25 which broke down when Kynaston dropped a poor pass, and J. Thomas was on the ball in a flash and carried it over the line, for an unconverted try.

Early in the second half D. M. James made a brilliant run from mid-field, punted ahead, and S. Williams gathered and sent in G. Davies for a try, which James converted.

Guy's were caught napping a little later when D. M. James crashed over from a loose scrum on the Guy's line, and once again James added the goal points.

Following this reverse, Guy's held their own for some minutes, Yerbury, Kolesar, Forbes and Williams doing great work in the loose, but, although they were awarded several penalties which gained them a lot of ground, they were eventually driven back and just before the end Vickery completed their discomfort by forcing his way through a scramble near the corner flag and registering another try.

Team.—J. P. Crawford; A. B. Baxter, R. C. S. Dick, R. U. F. Kynaston, D. M. Douglas; R. D. Allen, T. H. Eustace; J. P. Rochford, E. S. Nicholson, H. H. Crabb, J. R. D. Williams, A. Forbes, R. O. Yerbury, K. A. Stanyon-Jaques, P. D'O. Kolesar.

Guy's v. Richmond

(At Richmond on Saturday, December 4th)

THE conditions were as bad as they could be when the Hospital met Richmond and, after a terrific struggle, were beaten by the narrow margin of 2 penalty goals (6 points) to nil.

Owing to examinations, E. S. Nicholson was unable to turn out, but R. M. Sharpe, who deputised, proved a worthy substitute. Kolesar and Stanyon-Jaques, who did so well in the previous games, were retained in the pack, and

P. H. Birks took the place of Baxter at right wing three-quarter.

The biting wind and continuous rain and snow did not appear to worry the Hospital, who displayed vastly improved form and may consider themselves unfortunate to be beaten.

The forwards in particular were excellent and, playing the heavier and experienced Richmond pack at their own game, they stuck to their task manfully, and their display was easily the liveliest and best this season.

As a combination, the side fielded by Guy's in this match showed great possibilities, and their tackling was really magnificent.

No Guy's man ever hesitated to go down for the ball, and Crawford at full-back came through a gruelling match with flying colours and compared very favourably with Mennim, who was in great form for Richmond.

In the early stages, Richmond obtained most of the ball, and they varied their attack cleverly, but, in Dick, Kynaston and Birks they were met by a relentless defence and only Johnston could make much impression.

After Allen had driven Richmond back with two good kicks to touch, Stanyon-Jaques and Forbes broke through, but overkicked and Mennim was able to clear.

A little later Allen deceived the Richmond defence with a swerve and feint, and was almost through when he was tackled in the nick of time and pulled down.

Both Dick and Kynaston repeated the effort, but Richmond managed to scramble the ball away, and by closely controlled forward rushes carried play to the Hospital's 25. Laborde, Megaw and Melville were always to the fore in these attacks, and in one of these raids they almost dribbled through, but a magnificent effort by Crawford kept them out.

Immediately after the interval the Richmond forwards began a fierce offensive, and although they were checked temporarily, they came back and forced a line-out five yards from the corner flag. A scrummage followed, but Guy's relieved when Richmond were penalised for feet up.

The exchanges were fast and even, but Guy's had bad luck when they had two penalties awarded against them, the first from a scrum infringement and the second for holding, and Melville kicked two fine penalty goals.

After being heavily pressed, Guy's staged a grand revival towards the end, and the whole side fought back magnificently.

The forwards took a leaf out of Richmond's note-book and swept all before them; the last few minutes were all Guy's, and in one of many raids Stanyon-Jaques rushed over the line with the ball at his feet, but was prevented by two Richmond men from touching down.

Finally a grand cut-through by Dick looked certain to bring a score, but he was caught, and Richmond eventually cleared.

It was a fine effort, and the Hospital are to be congratulated on their splendid all-round display.

Team.—J. P. Crawford; D. M. Douglas, R. C. S. Dick, R. U. F. Kynaston, P. H. Birks; R. D. Allen, T. H. Eustace, J. P. Drew, R. M. Sharpe, H. H. Crabb, A. Forbes, J. R. D. Williams, P. D'O. Kolesar, R. O. Yerbury, K. A. Stanyon-Jaques.

Rugby "B" XV

"B" XV v. R.A.F. DEPOT (Uxbridge)

(*Played at Honor Oak Park on 1st December*)

GUY'S forwards held a heavier pack very successfully, and made two splendid rushes in the second half, both of which had a marked influence upon the result of the game. The first resulted in a good goal dropped by Joyce, and the second, five minutes before the end relieved our line, a possible score being prevented. If only the "B" forwards would arrange to have these rushes more frequently, they would be a good team, as the backs are "all right."

Won by 1 dropped goal and a try to a goal (7—5).

"B" XV v. SLOUGH "A" TEAM

(*Played at Slough on 4th December*)

Though this match was played in heavy snow it was a very good game to watch. Guy's won by 2 goals, 2 tries to nil. The forwards again packed well, and made one or two good combined rushes down the field. In one of the rushes they were led by Manning, who scored a try. The heeling out was clean and quick. The way the backs held the greasy and heavy ball was, at times, quite brilliant.

"B" XV v. BLACKHEATH EXTRA "A"

(*Played at Blackheath on 11th December*)

Guy's scored first with a try which was not converted. Immediately after this try the team should have played very much more strongly than they did in order to clinch matters with a heavier team. Blackheath scored a try, when perhaps Guy's were resting after their first try. This try was converted, and in the second half, though Guy's were in their opponents' half for the greater part of the time, Blackheath scored two more tries from which goals were kicked. The tackling amongst the forwards was poor, and

there should be no hesitation in going for the man with the ball. Though some of the backs played well, yet there seemed little "vim" about some of their movements.

"B" team forwards are packing well, heeling well, and have got the "hang" about following up, but they have still to show the "abandon" which will win games.

Lost, 1 try to 3 placed goals (3—15).

Rugby Fives

GUY'S v. SUTTON VALENCE MASTERS

GUY'S were well beaten by Sutton Valence School Masters at Maidstone by 99 points on Sunday, November 28th. Baylis won his singles game, that being the only game won by the Hospital. Macdonald and Bayles were 38 points down, and Smith and A. N. Other were 43 points down on the doubles. Southwell was unfortunately unable to play at the last moment owing to illness.

Team and Scores.—O. H. E. Bayles, 15—9; I. M. Macdonald, 8—15; H. D. Smith, 8—15; A. N. Other, 6—15. Bayles and Macdonald: 6—15, 4—15, 5—15, 7—15. Smith and A. N. Other: 6—15, 2—15, 4—15, 4—15.

Points.—For, 75; against, 174.

GUY'S v. ALLEYN'S OLD BOYS

GUY'S drew with Alleyn's Old Boys at Dulwich with 76 points aside on Friday, December 3rd. Chase and Bayles won all four games and were 44 points up, while the second pair, Smith and Stead, were 44 points down on the four games.

Teams and Scores.—O. H. E. Bayles and C. H. G. Chase: 15—10, 15—3, 15—2, 15—1. H. D. Smith and J. S. Stead: 2—15, 7—15, 6—15, 1—15.

Points.—For, 76; against, 76.

Hockey

INTER-HOSPITALS CUP

GUY'S v. ST. GEORGE'S

GUY'S beat St. George's in the first round of the Senior Cup by 3 goals to 1 on Friday, December 10th, at Honor Oak Park. St. George's turned out a stronger team than was expected, but it was unfortunate that their play was characterised more by toughness and forcefulness than by skill. The Guy's forwards were completely put off their game by these dubious methods, and although the Hospital had the upper hand throughout, it was not until the second half that the result was made certain.

Guy's attacked immediately from the bully-off, but the attacks came to nothing because of slowness in passing and shooting. So much did we monopolise the play that Needham, in the Guy's goal, did not have one shot to save throughout the first half, and only one to watch round the post. Guy's attacked continually up to half-time, but the forwards were not well together, and the shooting was bad and slow. Several times a goal was missed by inches, and the St. George's goalkeeper had more than his share of work to do. The interval came with no score, and Guy's still attacking.

We started off with great dash in the second half, and Martin scored from a centre by Cox, who ran clear of the defence from a pass by Bough. Guy's were still having the better of the exchanges, but the forwards could not press home the advantage. Bough scored a second goal for Guy's after fifteen minutes, with a crashing first-time shot from the back of the circle, and five minutes later Martin scored following a short corner hit by Leeming. St. George's hit their goal near time, when Needham miskicked.

The defence as usual played well throughout, Leeming, skippering the side in the enforced absence of Franklin, being outstanding. The forwards, however, were very much off form, probably due to the rather hardy tactics of the opposing defence. It is hoped that by the next Cup match the forwards will be toughened up (spinach?), so as to be able to cope more with these necessarily forceful Cup-tie exchanges.

Team.—E. J. A. Needham; J. S. Astbury, T. C. Thorne; E. Smith, J. A. Leeming (captain), H. A. Buck; B. M. Cox, G. C. Bough, E. J. Martin, S. G. McCallin, J. R. Fleming.

Other Results.—

November 24th (Home), Royal Naval College. Won, 3—2.

November 27th (Away), Teddington 2nd. Draw, 1—1.

December 4th (Away), London Hospital. Won, 8—2.

December 10th (Home), St. George's Hospital. Won, 3—1.

Record to date.—Played, 16; won, 10; drawn, 1; lost, 4; goals for, 67; goals against, 29.

FOLKESTONE HOCKEY FESTIVAL

It is with pleasure that we announce that the entry of the Hockey Club has been accepted to the Folkestone Easter Hockey Festival, 1938. At this Festival every year congregate some of the

best teams in the country, and the standard of hockey is higher here than at any other place. It says much for the play of the Hockey Club that it is this year competing in this Festival, and we trust that the much improved play of the Club will be seen at Folkestone, and so bring the name of Guy's more permanently into the records of another branch of sport. It is regretted that the Clubs' Union have, in spite of the excellent record of the Hockey Club, found it impossible to finance this tour in any way whatever.

Fencing

A THREE-WEAPON match was fought at the Borough Polytechnic on Saturday afternoon, 4th December, which resulted in a win for the Hospital by 14 wins to 13 wins.

The Hospital were not quite at full strength, and the match was a great personal triumph to R. F. Parfitt, who was undefeated in all weapons, winning nine fights.

The Hospital started by winning the Foil by the odd hit in nine. The Polytechnic, however, squared the match by winning the Epée by a similar margin. Thanks to Parfitt's unbeatable form the Hospital just got home winners by the odd fight.

The following represented the Hospital: Foil—Parfitt, Hacon, Lucas; Epée—Parfitt, Lane-Roberts, Browne; Sabre—Parfitt, Lane-Roberts, Moody.

Hospital Information, etc.

Notice

NATIONAL DENTAL SOCIETY'S FIRST ANNUAL DANCE

The London Section of the National Dental Society of Great Britain have arranged to hold their first Annual Dance at the Chesterfield Salon, Mayfair, on Friday, January 28th, 1938. The tickets will be 7*s*. 6*d*. each, and will be obtainable from Montagu Malleson, Hon. Secretary, Guy's Hospital Dental Society, S.E.1, or from the honorary secretaries of the other four London Dental Hospital Societies.

Pass List

ROYAL COLLEGE OF SURGEONS.

FINAL F.R.C.S.

November, 1937.

J. W. Cope
G. Hyman
P. T. Joseph
B. T. H. Marteinsson
P. McG. Moffatt
R. G. Reid
G. C. Sawyer
W. N. Searle
A. H. M. Siddons
R. G. Taylor
N. J. Townsley

UNIVERSITY OF LONDON.

THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.

November, 1937.

Pass.

L. J. Blay
P. M. Davies
P. H. Denton
D. Graham-Brown
H. A. Leggett
F. E. Pitt-Payne
M. R. Woods

GROUP I.

A. A. Beazeley
L. R. L. Edwards
W. G. Tillmann
A. D. Willis
L. J. Wolfson

GROUP II.

F. L. E. Musgrove
I. E. J. Thomas
R. O. Yerbury

Papers by Guy's Men

A. H. Douthwaite. The use of antistreptococcal preparations in general practice. *Practitioner*, 1937, cxxxix, 661.

Maurice Campbell. Acute pulmonary œdema: Its pathogenesis and treatment. *Ibid.*, 689.

H. St. John Rumsey. The stammering habit: Correction through speech re-education. *Ibid.*, 707.

Maurice E. Shaw. Diet in health and disease: VI. Diet in gastric diseases. *Ibid.*, 715.

Geoffrey Marshall. The early diagnosis of pulmonary tuberculosis. *Brit. Med. Jour.*, 1937, ii, 1103.

Martin A. Rushton. The failure of eruption in cleidocranial dysostosis. *Brit. Dent. Jour.*, 1937, Lxiii, 641.

C. Worster-Drought. The Arthropathies. *Post-Grad. Med. Jour.*, 1937, xiii, 445.

Guy's Hospital Reports.

October, 1937, No. 4, Vol. lxxxvii (Vol. xvii, 4th Series).

Contents.

G. W. Nicholson: Studies on tumour formation. Pp. 391-446.

Ronald E. Smith: Mumps. Pp. 447-468.

W. H. Trethowan: Edited by C. Lambrinudi and T. T. Stamm. Pp. 469-476.

T. B. Layton: On rigidity of the neck and on certain considerations arising therefrom—a surgical essay. Pp. 477-509.

Hugh Barber and G. R. Osborn: A case of mitral stenosis the result of trauma. Pp. 510-515.

Changes of Address

Nils L. Eckhoff, 56, York Terrace, N.W.1. *Welbeck* 7022.

Birth

DENTON.—On November 13th, 1937, to Hazel (née Milsom), wife of Aubrey R. O. Denton, M.R.C.S., L.R.C.P., of Modbury, S. Devon—a daughter.

Marriage

HUNT—WATTS.—On November 27th, 1937, at St. Mary's Church, Twickenham, Robert Graham Hunt to Mary Patricia Watts.

EDS. { H.B.O.C. C.H.E.